IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants	:	W. Daniel Hillis, *et al.*
Application No.	:	10/734,658
Confirmation No.	:	9013
Filed	:	December 11, 2003
TITLE	:	SPATIAL-TO-TEMPORAL DATA TRANSLATION AND TRANSMISSION

Examiner	:	ARPAN SAVLA
Art Unit	:	2185
Docket No.	:	SE1-0002C3-US
		(formerly 0305-003-005C-000000)
Customer No.	:	80118

APPELLANT'S SUPERSEDING APPEAL BRIEF

Dear Madam or Sir:

This Superseding Appeal Brief is intended to replace Appellant's earlier appeal brief and is intended to correct word-processing informalities noted in the claims of Appendix A after filing. As such, this documents is responsive to the Advisory Action mailed on December 18, 2009 and to the underlying Final Office Action dated October 5, 2009.

REMARKS — TABLE OF CONTENTS

I. REAL PARTY IN INTEREST

The real party in interest on this appeal is Searete, LLC by virtue of assignments of the inventors recorded on January 20, 2006, at Reel 017477 and Frame 0764. Searete, LLC is wholly owned by Intellectual Ventures Management LLC.

II. RELATED APPEALS AND INTERFERENCES

Please note that Appellant has also initiated an appeal proceeding in related U.S. Patent Application No. 10/734,659 entitled "Spatial-to-Temporal Data Translation and Scheduling Control," which is also being handled by Examiner Arpan P. Savla. Appellant's legal representative and the real party in interest are unaware of any other appeal or interference which will directly affect, be directly affected by, or have a bearing on the Board's decision in the present appeal.

III. STATUS OF CLAIMS

Claims 1-50 are currently pending. No claims have been cancelled or withdrawn. (Please see Appendix A).

Claims 1-4, 9-15, 17-21, 26-29, 34-40, and 42-46 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Pat. No. 5,920,701 ("Miller ") in view of U.S. Pat. No. 6,345,028 ("Jaeger") and U.S. Pat. No. 5,926,649 ("Ma"). *See* Office Action, p. 3 (5 October 2009).

Claims 5-8 and 30-33 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Pat. No. 5,920,701 ("Miller ") in view of U.S. Pat. No. 6,345,028 ("Jaeger") and U.S. Pat. No. 5,926,649 ("Ma") as applied to claim one above, and further in view of U.S. Pat. No. 5,801,753 ("Eyer"). *See* Office Action, p. 10 (5 October 2009).

Claims 16, 22-25, 41, and 47-50 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Pat. No. 5,920,701 ("Miller ") in view of U.S. Pat. No. 6,345,028 ("Jaeger") and U.S. Pat. No. 5,926,649 ("Ma") as applied to claim one above, and further in view of U.S. Pat. No. 6,081,402 ("Cho"). *See* Office Action, p. 12 (5 October 2009).

IV. STATUS OF AMENDMENTS

An Amendment under 37 C.F.R. 1.116 filed June 2, 2009 in response to the Examiner's Non-Final Office Action mailed February 2, 2009 has been considered, however, a proposed Amendment filed December 2, 2009 in response to the Examiner's Final Office Action mailed October 5, 2009, has been refused entry by the Examiner.

V. SUMMARY OF CLAIMED SUBJECT MATTER

Examiner rejections of two sets of claims[1] are appealed herein: (i) Independent Claim 1 and its Dependent Claims 2-25; and (ii) Independent Claim 26 and its Dependent Claims 27-50.

A. Summary of Independent Claim 1 and its Dependent Claims 2-25

In one instance, a method includes, but is not limited to: publishing a schedule of content transmission, the schedule being defined in response to an order in which the at least one content is spatially resident upon at least one hardware spatial data storage system, the schedule identifying the content by one or more times; reading at least one content from the at least one hardware spatial data storage system in a fashion independent of the schedule of content transmission; and transmitting the at least one content to a temporal data storage system in accord with the published schedule. *See specification at, e.g., page 2, lines 5-9 and page 23, line2 15-20 (Independent Claim 1).*

In one instance of the method, wherein said publishing a schedule of content transmission, the schedule being defined in response to an order in which the at least one content is spatially resident upon at least one hardware spatial data storage system, the schedule identifying the content by one or more times further includes, but is not limited to, printing the schedule of content transmission on a

[1] Appellant respectfully points out that in accordance with 37 CFR §41.37(c)(1)(v), Appellant herein provides a "summary of claimed subject matter [having a] concise explanation of the subject matter defined in each of the independent claims involved in the appeal, which shall refer to the specification by page and line number, and to the drawing, if any, by reference characters. For each independent claim involved in the appeal and for each dependent claim argued separately under the provisions of paragraph (c)(1)(vii) of this section, every means plus function and step plus function as permitted by 35 U.S.C. §112, sixth paragraph, must be identified and the structure, material, or acts described in the specification as corresponding to each claimed function must be set forth with reference to the specification by page and line number, and to the drawing, if any, by reference characters." However, Appellant respectfully points out that the herein-provided summary is illustrative only and is NOT intended to be in any way limiting. Appellant is providing this summary under protest that the USPTO's regulations in this area exceed its statutory authority (*e.g.* are *ultra vires*).

medium; and distributing the medium to one or more sites associated with one or more associated data switch controllers. *See specification at, e.g., page 2, lines 11-15 (Dependent Claim 2).*

In one instance of the method, wherein said publishing a schedule of content transmission, the schedule being defined in response to an order in which the at least one content is spatially resident upon at least one hardware spatial data storage system, the schedule identifying the content by one or more times further includes, but is not limited to, transmitting the schedule of content transmission over a data communications link. *See specification at, e.g., page 2, lines 17-19 (Dependent Claim 3).*

In one instance of the method, wherein said publishing a schedule of content transmission, the schedule being defined in response to an order in which the at least one content is spatially resident upon at least one hardware spatial data storage system, the schedule identifying the content by one or more times further includes, but is not limited to, transmitting the schedule of content transmission over a sideband data communications link. *See specification at, e.g., page 2, lines 21-24 (Dependent Claim 4).*

In one instance of the method, wherein said publishing a schedule of content transmission, the schedule being defined in response to an order in which the at least one content is spatially resident upon at least one hardware spatial data storage system, the schedule identifying the content by one or more times further includes, but is not limited to, transmitting the schedule of content transmission to the temporal data storage system. *See specification at, e.g., page 2, lines 26-28 (Dependent Claim 5).*

In one instance of the method, wherein said transmitting the schedule of content transmission to the temporal data storage system further includes, but is

not limited to, interleaving the schedule of content with other data. *See specification at, e.g., page 3, lines 1-3 (Dependent Claim 6).*

In one instance of the method, wherein said interleaving the schedule of content with other data further includes, but is not limited to, transmitting the schedule relative to at least one time marker amongst the at least one content. *See specification at, e.g., page 3, lines 5-7 (Dependent Claim 7).*

In one instance of the method, wherein said interleaving the schedule of content with other data further includes, but is not limited to, transmitting the schedule amongst the at least one content at a determined interval of time. *See specification at, e.g., page 3, lines 9-11 (Dependent Claim 8).*

In one instance of the method, wherein said reading at least one content from the at least one hardware spatial data storage system in a fashion independent of the schedule of content transmission further includes, but is not limited to, reading the at least one content from at least one hard disk drive. *See specification at, e.g., page 3, lines 13-16 (Dependent Claim 9).*

In one instance of the method, wherein said reading the at least one content from at least one hard disk drive further includes, but is not limited to, reading tracks of the at least one hard disk drive in a defined sequence including at least a sequence starting with an outer track and ending with an inner track. *See specification at, e.g., page 3, lines 18-21 (Dependent Claim 10).*

In one instance of the method, wherein said reading the at least one content from at least one hard disk drive further includes, but is not limited to: reading tracks of the at least one hard disk drive in a defined sequence including at least a sequence starting with an inner track and ending with an outer track. *See specification at, e.g., page 3, lines 23-26 (Dependent Claim 11).*

In one instance of the method, wherein said reading the at least one content from at least one hard disk drive further includes, but is not limited to: reading the at least one content from a first disk drive; and reading a copy of the at least one content from a second disk drive. *See specification at, e.g., page 3, line 28 – page 4, line2 (Dependent Claim 12).*

In one instance of the method, wherein said reading the at least one content from at least one hard disk drive further includes, but is not limited to: determining a first time interval during which a first segment of a first content will be from a first disk drive; determining a second time interval during which a second segment of the first content will be read from a second disk drive; and defining the schedule in response to the first time interval and the second time interval. *See specification at, e.g., page 4, lines 4-6 (Dependent Claim 13).*

In one instance of the method, wherein said reading at least one content from the at least one hardware spatial data storage system in a fashion independent of the schedule of content transmission further includes, but is not limited to: reading the at least one content of a hard disk drive such that an aggregate distance traversed by a hard disk head is minimized. *See specification at, e.g., page 4, lines 8-11 (Dependent Claim 14).*

In one instance of the method, wherein said reading at least one content from the at least one hardware spatial data storage system in a fashion independent of the schedule of content transmission further includes, but is not limited to: reading the at least one content of a spatial address device such that an aggregate time to read the at least one content of the spatial address device is minimized. *See specification at, e.g., page 4, lines 13-17 (Dependent Claim 15).*

In one instance of the method, wherein said reading at least one content from the at least one hardware spatial data storage system in a fashion

independent of the schedule of content transmission further includes, but is not limited to:

reading a storage of a hard disk drive with a hard drive arm having at least two disk drive heads, at least one of which is dedicated to at least one specific disk drive track. *See specification at, e.g., page 4, lines 19-23 (Dependent Claim 16).*

In one instance of the method, wherein said reading at least one content from at least one spatial data storage system in a fashion independent of the schedule of content transmission further includes, but is not limited to: reading the at least one content from at least one file address storage system. *See specification at, e.g., page 4, lines 25-28 (Dependent Claim 17).*

In one instance of the method, wherein said reading at least one content from the at least one hardware spatial data storage system in a fashion independent of the schedule of content transmission further includes, but is not limited to: reading the at least one content from at least one disk address storage system. *See specification at, e.g., page 5, lines 1-4 (Dependent Claim 18).*

In one instance of the method, wherein said reading at least one content from the at least one hardware spatial data storage system in a fashion independent of the schedule of content transmission further includes, but is not limited to: reading the at least one content from at least one tape address storage system. *See specification at, e.g., page 5, lines 6-9 (Dependent Claim 19).*

In one instance of the method, wherein said reading at least one content from the at least one hardware spatial data storage system in a fashion independent of the schedule of content transmission further includes, but is not limited to: reading the at least one content from at least one static memory address storage system. *See specification at, e.g., page 5, lines 11-14 (Dependent Claim 20).*

In one instance of the method, wherein said reading at least one content from the at least one hardware spatial data storage system in a fashion independent of the schedule of content transmission further includes, but is not limited to: reading the at least one content from at least one object address storage system. *See specification at, e.g., page 5, lines 16-19 (Dependent Claim 21).*

In one instance of the method, wherein said transmitting the at least one content to a temporal data storage system in accord with the published schedule further includes, but is not limited to: receiving a portion of the at least one content from the hardware spatial data storage system with a delay-reclocking drive; writing the portion of the at least one content to the delay-reclocking drive with a head of a first arm of the delay-reclocking drive; reading the portion of the at least one content from the delay-reclocking drive with a head of a second arm of the delay-reclocking drive, the head of the second arm of the delay-reclocking drive being on a same track as the head of the first arm; and transmitting the portion of the at least one content to the temporal data storage system. *See specification at, e.g., page 5, lines 21-29 (Dependent Claim 22).*

In one instance of the method, wherein said transmitting the at least one content to a temporal data storage system in accord with the published schedule further includes, but is not limited to: receiving a portion of the at least one content from the hardware spatial data storage system with a delay-reclocking drive; writing the portion of the at least one content to the delay-reclocking drive with a head of a first arm of the delay-reclocking drive; reading the portion of the at least one content from the delay-reclocking drive with a head of a second arm of the delay-reclocking drive, the head of the second arm of the delay-reclocking drive being on a different track than the head of the first arm; and transmitting the portion of the at least one content to the temporal data storage system. *See specification at, e.g., page 6, lines 1-9 (Dependent Claim 23).*

In one instance of the method, wherein said transmitting the at least one content to a temporal data storage system in accord with the published schedule further includes, but is not limited to: receiving a portion of the at least one content from the hardware spatial data storage system with a delay-reclocking drive; writing the portion of the at least one content to the delay-reclocking drive with a first head of a first arm of the delay-reclocking drive; reading the portion of the at least one content from the delay-reclocking drive with a second head of the first arm of the delay-reclocking drive; and transmitting the portion of the at least one content to the temporal data storage system. *See specification at, e.g., page 6, lines 11-18 (Dependent Claim 24).*

In one instance of the method, wherein said transmitting the at least one content to a temporal data storage system in accord with the published schedule further includes, but is not limited to: receiving a portion of the at least one content from the hardware spatial data storage system with a delay-reclocking drive; writing the portion of the at least one content to the delay-reclocking drive with a first head of a first arm of the delay-reclocking drive; reading the portion of the at least one content from the delay-reclocking drive with the first head of the first arm of the delay-reclocking drive; and transmitting the portion of the at least one content to the temporal data storage system. *See specification at, e.g., page 6, lines 20-27 (Dependent Claim 25).*

B. Summary of Independent Claim 26 and its Dependent Claims 27-50

In one instance, a system comprising: means for publishing a schedule of content transmission, the schedule being defined in response to an order in which the at least one content is spatially resident upon at least one hardware spatial data storage system, the schedule identifying the content by one or more times; means for reading at least one content from at least one hardware spatial data storage system in a fashion independent of the schedule of content transmission; and

means for transmitting the at least one content to a temporal data storage system in accord with the published schedule. *See specification at, e.g., page 16, line 20 – page 17, line 2 (Independent Claim 26).*

In one instance of the method, wherein said means for publishing a schedule of content transmission, the schedule being defined in response to an order in which the at least one content is spatially resident upon at least one hardware spatial data storage system, the schedule identifying the content by one or more times further includes, but is not limited to: means for printing the schedule of content transmission on a medium; and means for distributing the medium to one or more sites associated with one or more associated data switch controllers. *See specification at, e.g., page 16, line 20 – page 17, line 2 and page 24, lines 13-19 (Dependent Claim 27).*

In one instance of the method, wherein said means for publishing a schedule of content transmission, the schedule being defined in response to an order in which the at least one content is spatially resident upon at least one hardware spatial data storage system, the schedule identifying the content by one or more times further includes, but is not limited to: means for transmitting the schedule of content transmission over a data communications link. *See specification at, e.g., page 17, lines 14-20 (Dependent Claim 28).*

In one instance of the method, wherein said means for publishing a schedule of content transmission, the schedule being defined in response to an order in which the at least one content is spatially resident upon at least one hardware spatial data storage system, the schedule identifying the content by one or more times further includes, but is not limited to: means for transmitting the schedule of content transmission over a sideband data communications link. *See specification at, e.g., page 2, lines 21-24 (Dependent Claim 29).*

In one instance of the method, wherein said means for publishing a schedule of content transmission, the schedule being defined in response to an order in which the at least one content is spatially resident upon at least one hardware spatial data storage system, the schedule identifying the content by one or more times further includes, but is not limited to: means for transmitting the schedule of content transmission to the temporal data storage system. *See specification at, e.g., page 17, lines 4-12 (Dependent Claim 30).*

In one instance of the method, wherein said means for transmitting the schedule of content transmission to the temporal data storage system further includes, but is not limited to: means for interleaving the schedule of content with other data. *See specification at, e.g., page 17, line 22 – page 18, line 2 (Dependent Claim 31).*

In one instance of the method, wherein said means for interleaving the schedule of content with other data further includes, but is not limited to: means for transmitting the schedule relative to at least one time marker amongst the at least one content. *See specification at, e.g., page 3, lines 5-7 (Dependent Claim 32).*

In one instance of the method, wherein said means for interleaving the schedule of content with other data further includes, but is not limited to: means for transmitting the schedule amongst the at least one content at a determined interval of time. *See specification at, e.g., page 3, lines 9-11 (Dependent Claim 33).*

In one instance of the method, wherein said means for reading at least one content from at least one hardware spatial data storage system in a fashion independent of the schedule of content transmission further includes, but is not limited to: means for reading the at least one content from at least one hard disk drive. *See specification at, e.g., page 19, lines 2-8 (Dependent Claim 34).*

In one instance of the method, wherein said means for reading the at least one content from at least one hard disk drive further includes, but is not limited to: means for reading tracks of the at least one hard disk drive in a defined sequence including at least a sequence starting with an outer track and ending with an inner track. *See specification at, e.g., page 19, lines 10-18 (Dependent Claim 35).*

In one instance of the method, wherein said means for reading the at least one content from at least one hard disk drive further includes, but is not limited to: means for reading tracks of the at least one hard disk drive in a defined sequence including at least a sequence starting with an inner track and ending with an outer track. *See specification at, e.g., page 19, lines 10-18 (Dependent Claim 36).*

In one instance of the method, wherein said means for reading the at least one content from at least one hard disk drive further includes, but is not limited to: means for reading the at least one content from a first disk drive; and means for reading a copy of the at least one content from a second disk drive. *See specification at, e.g., page 19, lines 20-26 (Dependent Claim 37).*

In one instance of the method, wherein said means for reading the at least one content from at least one hard disk drive further includes, but is not limited to: means for reading a first content from a first disk drive; and means for reading a second content from a second disk drive. *See specification at, e.g., page 19, line 28 – page 20, line 2 (Dependent Claim 38).*

In one instance of the method, wherein said means for reading at least one content from at least one hardware spatial data storage system in a fashion independent of the schedule of content transmission further includes, but is not limited to: means for reading the at least one content of a hard disk drive such that an aggregate distance traversed by a hard disk head is minimized. *See specification at, e.g., page 20, lines 4-12 (Dependent Claim 39).*

In one instance of the method, wherein said means for reading at least one content from at least one hardware spatial data storage system in a fashion independent of the schedule of content transmission further includes, but is not limited to: means for reading the at least one content of a spatial address device such that an aggregate time to read the at least one content of the spatial address device is minimized. *See specification at, e.g., page 20, lines 4-12 (Dependent Claim 40).*

In one instance of the method, wherein said means for reading at least one content from at least one hardware spatial data storage system in a fashion independent of the schedule of content transmission further includes, but is not limited to: means for reading a storage of a hard disk drive with a hard drive arm having at least two disk drive heads, at least one of which is dedicated to at least one specific disk drive track. *See specification at, e.g., page 20, lines 4-12 (Dependent Claim 41).*

In one instance of the method, wherein said means for reading at least one content from at least one hardware spatial data storage system in a fashion independent of the schedule of content transmission further includes, but is not limited to: means for reading the at least one content from at least one file address storage system. *See specification at, e.g., page 4, lines 25-28 (Dependent Claim 42).*

In one instance of the method, wherein said means for reading at least one content from at least one hardware spatial data storage system in a fashion independent of the schedule of content transmission further includes, but is not limited to: means for reading the at least one content from at least one disk address storage system. *See specification at, e.g., page 5, lines 1-4 (Dependent Claim 43).*

In one instance of the method, wherein said means for reading at least one content from at least one hardware spatial data storage system in a fashion independent of the schedule of content transmission further includes, but is not limited to: means for reading the at least one content from at least one tape address storage system. *See specification at, e.g., page 5, lines 6-9 (Dependent Claim 44).*

In one instance of the method, wherein said means for reading at least one content from at least one hardware spatial data storage system in a fashion independent of the schedule of content transmission further includes, but is not limited to: means for reading the at least one content from at least one static memory address storage system. *See specification at, e.g., page 5, lines 11-14 (Dependent Claim 45).*

In one instance of the method, wherein said means for reading at least one content from at least one hardware spatial data storage system in a fashion independent of the schedule of content transmission further includes, but is not limited to: means for reading the at least one content from at least one object address storage system. *See specification at, e.g., page 5, lines 16-19 (Dependent Claim 46).*

In one instance of the method, wherein said means for transmitting the at least one content to a temporal data storage system in accord with the published schedule further includes, but is not limited to: means for receiving a portion of the at least one content from the hardware spatial data storage system with a delay-reclocking drive; means for writing the portion of the at least one content to the delay-reclocking drive with a head of a first arm of the delay-reclocking drive; means for reading the portion of the at least one content from the delay-reclocking drive with a head of a second arm of the delay-reclocking drive, the head of the second arm of the delay-reclocking drive being on a same track as the head of the first arm; and means for transmitting the portion of the at least one content to the

temporal data storage system. *See specification at, e.g., page 5, lines 21-29 (Dependent Claim 47).*

In one instance of the method, wherein said means for transmitting the at least one content to a temporal data storage system in accord with the published schedule further includes, but is not limited to: means for receiving a portion of the at least one content from the hardware spatial data storage system with a delay-reclocking drive; means for writing the portion of the at least one content to the delay-reclocking drive with a head of a first arm of the delay-reclocking drive; means for reading the portion of the at least one content from the delay-reclocking drive with a head of a second arm of the delay-reclocking drive, the head of the second arm of the delay-reclocking drive being on a different track than the head of the first arm; and means for transmitting the portion of the at least one content to the temporal data storage system. *See specification at, e.g., page 6, lines 1-9 (Dependent Claim 48).*

In one instance of the method, wherein said means for transmitting the at least one content to a temporal data storage system in accord with the published schedule further includes, but is not limited to: means for receiving a portion of the at least one content from the hardware spatial data storage system with a delay-reclocking drive; means for writing the portion of the at least one content to the delay-reclocking drive with a first head of a first arm of the delay-reclocking drive; means for reading the portion of the at least one content from the delay-reclocking drive with a second head of the first arm of the delay-reclocking drive; and means for transmitting the portion of the at least one content to the temporal data storage system. *See specification at, e.g., page 6, lines 11-18 (Dependent Claim 49).*

In one instance of the method, wherein said means for transmitting the at least one content to a temporal data storage system in accord with the published schedule further includes, but is not limited to: means for receiving a portion of

the at least one content from the hardware spatial data storage system with a delay-reclocking drive; means for writing the portion of the at least one content to the delay-reclocking drive with a first head of a first arm of the delay-reclocking drive; means for reading the portion of the at least one content from the delay-reclocking drive with the first head of the first arm of the delay-reclocking drive; and means for transmitting the portion of the at least one content to the temporal data storage system. *See specification at, e.g., page 6, lines 20-27 (Dependent Claim 50).*

VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

The issues in this response relate to whether the Examiner has met his burden of establishing a *prima facie* case sufficient to establish that Appellant's Claims 1-50 are unpatentable. Specifically, the issues are as follows:

1. Whether the Examiner has met his burden to show Claims 1-4, 9-15, 17-21, 26-29, 34-40, and 42-46 are unpatentable over Miller in view of Jaeger in further view of Ma.

2. Whether the Examiner has met his burden to show Claims 5-8 and 30-33 are unpatentable over Miller in view of Jaeger in further view of Ma in further view of Eyer.

3. Whether the Examiner has met his burden to show 16, 22-25, 41, and 47-50 are unpatentable over Miller in view of Jaeger in further view of Ma in further view of Cho.

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VII. ARGUMENT: ART OF RECORD DOES NOT ESTABLISH *PRIMA FACIE* CASE OF UNPATENTABILITY IN VIEW OF CITED ART OF RECORD

The USPTO has stated, "Claims 1-4, 9-15, 17-21, 26-29, 34-36, [sic] 39, 40, and 42-46 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Miller et al. (U.S. Pat. No. 5,920,701) (hereinafter "Miller ") in view of Jaeger (U.S. Pat. No. 6,345,028) [hereinafter "Jaeger"] and Ma et al. (U.S. Pat. No. 5,926,649) (hereinafter "Ma"). Office Action, p. 3 (5 October 2009).

In response, Applicant respectfully asserts herein that, under the MPEP and legal standards for patentability as set forth below, the art of record does not establish a *prima facie* case of the unpatentability of Applicant's claims at issue. Specifically, Applicant respectfully shows below that the art of record does not recite the text of Applicant's claims at issue, and hence fails to establish a *prima facie* case of unpatentability. Accordingly, Applicant respectfully requests that the USPTO withdraw its rejections and hold all claims to be allowable over the art of record.

A. Legal Standards for Patentability[1]

The MPEP states as follows: "the examiner bears the initial burden, on review of the prior art or on any other ground, of presenting a *prima facie* case of unpatentability. If that burden is met, the burden of coming forward with evidence or argument shifts to the applicant. . . If examination at the initial stage does not produce a *prima facie* case of unpatentability, then without more the applicant is entitled to grant of the patent." *MPEP* § 2107 (citing *In re Oetiker*, 977 F.2d 1443, 1445, 24 U.S.P.Q.2d 1443, 1444 (Fed. Cir. 1992)); *In Re Glaug*,

[1] Applicant is aware that Examiner is familiar with the MPEP standards. Applicant is merely setting forth the MPEP standards to serve as a framework for Applicant's arguments following and to ensure a complete written record is established. Should Examiner disagree with Applicant's characterization of the MPEP standards, Applicant respectfully request correction.

283 F.3d 1335, 62 USPQ2d 1151 (Fed. Cir. 2002) ("During patent examination the PTO bears the initial burden of presenting a *prima facie* case of unpatentability. *In re Oetiker*, 977 F.2d 1443, 1445, 24 U.S.P.Q.2d 1443, 1444 (Fed. Cir. 1992); *In re Piasecki*, 745 F.2d 1468, 1472, 223 U.S.P.Q. 785, 788 (Fed. Cir. 1984). If the PTO fails to meet this burden, then the applicant is entitled to the patent."). Accordingly, unless and until an examiner presents evidence establishing *prima facie* unpatentability, an applicant is entitled to a patent on all claims presented for examination.

For example, in making an obviousness rejection, the evidence required must come in the form of particular findings: "[b]road conclusory statements standing alone are not 'evidence'." *In re Kotzab,* 217 F.3d 1365, 1370 (Fed. Cir. 2000) (citing In re Dembiczak, 175 F.3d 994, 999 (Fed. Cir. 1999)). The Supreme Court has affirmed this requirement in its *KSR v. Teleflex* decision: "[R]ejections on obviousness grounds cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness." *KSR v. Teleflex, 550 U.S. 398; 127 S. Ct. 1727 at 1741* (citing *In re Kahn*, 441 F. 3d 977, 988 (Fed. Cir. 2006)).

The court in *Kotzab* held that "more than a mere scintilla of evidence is necessary" to support an Examiner's *prima facie* case. In re Kotzab, 217 F.3d 1365, 1371 (Fed. Cir. 2000). This underscores the requirement for *some* evidence in making a prima facie case; rejections based on *no* evidence have repeatedly been reversed by the Federal Circuit. See *In re McNeil-PPC*, 2008-1546, slip op. 1, 10 (Fed. Cir. July 31, 2009) (anticipation rejection reversed where findings by the BPAI about the disclosures of a prior art patent application are not supported by substantial evidence), *In re Kotzab,* 217 F.3d 1365, 1371 (Fed. Cir. 2000) (obviousness rejection reversed where there was no finding as to the specific understanding or principle needed to support Examiner's prima facie case), and *In re Robert Skvorecz*, 2008-1221, slip op. 1, 7 (Fed. Cir. September 3, 2009)

(anticipation rejection reversed where Examiner's assertion that reference contained identical recitations as the claim was unsupported by any evidence).

1. What a Reference "Teaches" Is a Question of Fact

What a reference "teaches" is a question of fact.[2,3,4] Conclusory statements that a reference "teaches" something beyond its bare recitations/direct disclosure do not constitute ANY evidence of such "teachings" unless they are supported by objective evidence. *See In re McNeil-PPC,* 2008-1546 (Fed. Cir. July 31, 2009);[5] *In re Lee,* 277 F.3d 1338 (Fed. Cir. 2002);[6] *In re Kotzab*, 217 F.3d

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[2] *See Rapoport v. Dement,* 254 F.3d 1053, 1060 (Fed. Cir. 2001) ("What a reference **teaches** is a question of fact,.. Therefore, we review the Board's **characterization** of the **disclosure** in the FPR Publication for **substantial evidence**.") (emphasis added).

[3] *In re Bell***,** 991 F.2d 781 (Fed. Cir. 1993) (reversing the PTO and holding when the PTO presented no evidence to cure *prima facie* differences between patent claim and Examiner assertions regarding what the allegedly invalidating prior art "taught")

[4] Anticipation**,** as well as what a reference teaches**,** is a question of fact. *Teleflex, Inc. v. Ficosa N. Am. Corp.*, 299 F.3d 1313, 1323 (Fed. Cir. 2002).

[5] In *McNeil,* the Examiner had rejected claims reciting a tampon having "a generally cylindrical compressed, solid fibre core" and ribs "compressed less than the fiber core" in view of a Japanese patent application ("Sasaki"). McNeil appealed to the Board of Patent Appeals and Interferences, which "specifically found that 'Sasaki reasonably appears to depict a tampon having a generally cylindrical absorbent portion with a generally cylindrical compressed solid fiber core from which longitudinal ribs extend radially outward.' " *See id.,* 2008-1546, slip op. 1, 3 (Fed. Cir. July 31, 2009). In light of this and its finding that of each rib of Sasaki being "compressed less than the fiber core," the Board affirmed the rejections. Insofar that the Sasaki reference did not directly disclose/recite as alleged by the Board, and since the Board did not supply evidence supporting its statement that "Sasaki reasonably appears to depict a tampon having a generally cylindrical absorbent portion with a generally cylindrical compressed solid fiber core from which longitudinal ribs extend radially outward," the Federal Circuit reversed the rejection for lack of "substantial evidentiary support," stating as follows:

> There is not substantial evidence, indeed, no evidence, that Sasaki discloses ribs "compressed less than the fiber core" or "a generally cylindrical compressed, solid fibre core." ... Just as the Sasaki figures do not indicate the relative compression of the different portions of the tampon, the Sasaki figures completely lack any indication of the relative coarseness of different portions. ... Lastly, turning to the issue of spacing of the ribs, Figure 8 shows a space between the bottommost ribs, and there is arguably some space shown between other ribs. However, because it is neither clear that Sasaki discloses a core nor which portions of Sasaki's tampon the Board considered to be the ribs and which the Board considered to be the core, we cannot say that substantial evidence supports the Board's determination that Sasaki discloses ribs separated from each other "at the proximal end by an amount greater than" than at "the distal end."

1365, 1369 (Fed. Cir. 2000) ("Whether the Board relies on an express or an implicit showing, it must provide particular findings related thereto. … Broad conclusory statements standing alone are not "evidence.").[7] Even if the PTO personnel were to seek to support their characterizations with an expert witness affidavit, the law is that conclusory statements by an expert that a reference "teaches" something beyond its bare recitations/direct disclosure do not constitute ANY evidence of such "teachings" unless they are supported by objective documentary evidence.[8] Thus, when a party to a matter asserts that a reference

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See id., 2008-1546, slip op. 1, 10-11 (Fed. Cir. July 31, 2009).

[6] In *Lee*, the USPTO argued that, to the "common sense of a person of ordinary skill in the art," it was obvious that one could combine a prior patent for an on-screen television menu with an on-screen picture-quality adjustment for a video game played on a television illustrated in the game's handbook. The Federal Circuit ruled that obviousness must be based on "objective evidence of record." Finding no specific published suggestion in the record, the Federal Circuit ruled the invention patentable. *See id.*, 277 F.3d 1338, 1342-44, 61 USPQ2d 1430, 1433-34 (Fed. Cir. 2002) (describing the BPAI's obligation to develop an evidentiary basis for its factual findings to allow for meaningful judicial review under the substantial evidence standard).

[7] In *Kotzab*, the Federal Circuit reversed the BPAI as follows:

> The Examiner cites Evans for teaching that "one *system* constructed and operated according to the invention may be used to control a number of valves." Evans application, p. 19, ll. 6-8 (emphasis added). In view of this disclosure only, the Examiner concluded that Evans teaches the use of one *sensor* to control a number of valves. This conclusion must necessarily rest on the unstated premise by the Examiner that "one system" is equal to "one sensor."
>
> But the Board's decision, adopting the Examiner's premise, lacks the necessary substantial evidence to support a rejection of Kotzab's claims. Specifically, there is not substantial evidence to show that "one system" is the same thing as "one sensor." The words "sensor" and "probe" are used throughout Evans to refer to the device that measures the mold temperature. … Evans clearly never uses the term "system" as a substitute for the simple temperature measuring device it calls "sensor." And, the Board made no reference to any evidence in the record that would equate "one system" with "one sensor."
>
> As mentioned previously, more than a mere scintilla of evidence is necessary to support the Board's implicit conclusion that "one system" is equal to "one sensor." Based on the entirety of Evans' disclosure, we cannot say that there is such relevant evidence as a reasonable mind might accept as adequate to support the conclusion that "one system" means "one sensor."

See id., 217 F.3d 1365, 1370-71 (Fed. Cir. 2000) (underline added).

[8] *See Motorola, Inc. v. Interdigital Tech. Corp.*, 121 F.3d 1461, 1473 (Fed. Cir. 1997) ("The district court's holding misapprehends the rigors of anticipation. For a prior art reference to anticipate a

"teaches" something beyond its bare recitations/direct disclosure, and that factual assertion is challenged by an opposite party, the law requires that the asserting party provide objective evidentiary support to "close the gap" between what the reference recites and the what the asserting party *alleges* the reference teaches; in the absence of such evidence, there should be no finding of fact in favor of the asserted teaching.[9,10,11,12]

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claim, the reference must disclose each and every element of the claim with sufficient clarity to prove its existence in the prior art... **Although this disclosure requirement presupposes the knowledge of one skilled in the art of the claimed invention, that presumed knowledge does not grant a license to read into the prior art reference teachings that are not there. An expert's conclusory testimony, unsupported by the documentary evidence, cannot supplant the requirement of anticipatory disclosure in the prior art reference itself.**") (emphasis added); *see also Genzyme Corp. v. Atrium Med. Corp.*, 315 F. Supp. 2d 552, 563 (D. Del. 2004) ("For a patent to be anticipated, every element of a patent claim must appear in a single reference. **Other references and opinion may be used to reveal what the reference would have meant to those skilled in the art at the time of the invention.... For a prior art reference to anticipate a claim, the reference must disclose each and every element of the claim with sufficient clarity to prove its existence in the prior art. Presumed knowledge of one skilled in the art does not allow an expert to read into the reference elements that are not there.**") (emphasis added)

[9] *See Rapoport v. Dement* 254 f. 3rd 1053, 1060 (Fed. Cir. 2001) . In *Rapoport*, the Federal Circuit affirmed the Board's holding that a publication did not anticipate a claim, reasoning as follows (emphasis added):

> Having construed the disputed term in the interference count and affirmed the Board's interpretation, we can properly address the merits of Rapoport's anticipation argument. The Board found that the disclosure of the FPR Publication was limited to treatment of anxiety in patients suffering from sleep apnea with buspirone, and did not address treatment of the underlying sleep apnea disorder. What a reference **teaches** is a question of fact,.... There is no disclosure in the FPR Publication of tests in which buspirone is administered to patients suffering from sleep apnea with the intent to cure the underlying condition.... The Board also correctly found that the FPR Publication does not show administering buspirone in any specific amounts to patients suffering from sleep apnea,... We note that there is no mention in the FRP Publication of administering buspirone to a patient at bedtime.... Therefore, for all the reasons stated above, we find that the Board's conclusion that the FPR Publication does not disclose administration of buspirone to patients suffering from sleep apnea to treat sleep apnea is supported by substantial evidence.

[10] *See In re Bell*, 991 F.2d 781 (Fed. Cir. 1993) (reversing the PTO's holding that a gene was "prima facie obvious over its corresponding protein" in the cited reference, absent any evidence of a one-to-one correspondence).

[11] *See In re McNeil-PPC*, 2008-1546 (Fed. Cir. July 31, 2009).

[12] *See In re Kotzab*, 217 F.3d 1365, 1369 (Fed. Cir. 2000).

2. MPEP Standards for Determining Anticipation

An examiner bears the initial burden of factually supporting any *prima facie* conclusion of anticipation. *Ex Parte Skinner*, 2 U.S.P.Q.2d 1788, 1788-89 (B.P.A.I. 1986); *In Re King, 801 F.2d 1324, 231 U.S.P.Q. (BNA) 136 (Fed. Cir. 1986); MPEP* § 2107 (citing *In re Oetiker*, 977 F.2d 1443, 1445, 24 U.S.P.Q.2d 1443, 1444 (Fed. Cir. 1992) ("[T]he examiner bears the initial burden, on review of the prior art or on any other ground, of presenting a *prima facie* case of unpatentability....")). Failure of an examiner to meet this burden entitles an applicant to a patent. *Id.* ("[i]f examination at the initial stage does not produce a *prima facie* case of unpatentability, then without more the applicant is entitled to grant of the patent").

The MPEP indicates that in order for an examiner to establish a *prima facie* case of anticipation of an applicant's claim, the examiner must first interpret the claim,[13] and thereafter show that the cited prior art discloses the same elements, in the same arrangement, as the elements of the claim which the examiner asserts is anticipated. More specifically, the MPEP states that "[a] claim is anticipated *only if each and every element as set forth in the claim is found*, either expressly or inherently described, in a single prior art reference. . . . The identical invention must be shown in as complete detail as is contained in the . . . claim. . . . The elements must be arranged as required by the claim . . . .". *MPEP* § 2131 (emphasis added). For example, In *McNeil,* the Examiner had rejected claims reciting a tampon having "a generally cylindrical compressed, solid fibre core" and ribs "compressed less than the fiber core" in view of a Japanese patent application ("Sasaki"). McNeil appealed to the Board of Patent Appeals and Interferences, which "specifically found that 'Sasaki reasonably appears to depict a tampon having a generally cylindrical absorbent portion with a generally cylindrical compressed solid fiber core from which longitudinal ribs extend

[13] With respect to interpreting a claim at issue, the MPEP directs that, during examination — as opposed to subsequent to issue — such claim be interpreted as broadly as the claim terms would reasonably allow, in light of the specification, when read by one skilled in the art with which the claimed invention is most closely connected. *MPEP* § 2111.

radially outward.' " *See id.,* 2008-1546, slip op. 1, 3 (Fed. Cir. July 31, 2009). In light of this and its finding that of each rib of Sasaki being "compressed less than the fiber core," the Board affirmed the rejections. Insofar as the Sasaki reference did not directly disclose/recite as alleged by the Board, and since the Board did not supply evidence supporting its statement that "Sasaki reasonably appears to depict a tampon having a generally cylindrical absorbent portion with a generally cylindrical compressed solid fiber core from which longitudinal ribs extend radially outward," the Federal Circuit reversed the rejection for lack of "substantial evidentiary support," stating as follows:

> There is not substantial evidence, indeed, no evidence, that Sasaki discloses ribs "compressed less than the fiber core" or "a generally cylindrical compressed, solid fibre core." ... Just as the Sasaki figures do not indicate the relative compression of the different portions of the tampon, the Sasaki figures completely lack any indication of the relative coarseness of different portions. ... Lastly, turning to the issue of spacing of the ribs, Figure 8 shows a space between the bottommost ribs, and there is arguably some space shown between other ribs. However, because it is neither clear that Sasaki discloses a core nor which portions of Sasaki's tampon the Board considered to be the ribs and which the Board considered to be the core, we cannot say that substantial evidence supports the Board's determination that Sasaki discloses ribs separated from each other "at the proximal end by an amount greater than" than at "the distal end."

McNeil, 2008-1546, slip op. 1, 10-11 (Fed. Cir. July 31, 2009) (emphasis added).

In *In re Skvorecz*, an anticipation rejection rested on an interpretation of features of a wire stand. The claim at issue required that each wire leg of the stand have a laterally displacing offset. The BPAI admitted that in the cited reference, "Buff," the offset in the rim was not shown to be 'for laterally displacing each wire leg relative to said upper rim' as required by claim 1, but nonetheless maintained the rejection. The Federal Circuit reversed for lack of evidence:

> On rehearing the Board stated that Buff's wire 48 is a "transverse member" and not a wire leg, and therefore that it need not have a displacing offset. Mr. Skvorecz states, and we agree, that Buff's wire 48 is a leg of the Buff structure. The Board's contrary statement is unsupported by any evidence.

Id. at p. 8 (emphasis added).

Consequently, under the guidelines of the MPEP set forth above, if there is *any* substantial difference between the prior art cited by an examiner and an applicant's claim which the examiner asserts is rendered anticipated by the prior art, the prior art does NOT establish a *prima facie* case of anticipation and, barring other rejections, the applicant is entitled to a patent on such claim.

3. MPEP Standards for Determining Obviousness

"[T]he examiner bears the initial burden of factually supporting any *prima facie* conclusion of obviousness."[14] *MPEP* § 2142. The MPEP indicates that in order for an examiner to establish a *prima facie* case that an invention, as defined by a claim at issue, is obvious, the examiner must (1) interpret the claim at issue; (2) define one or more prior art reference components relevant to the claim at issue; (3) ascertain the differences between the one or more prior art reference components and the elements of the claim at issue; and (4) adduce objective evidence which establishes, under a preponderance of the evidence standard, a teaching to modify the teachings of the prior art reference components such that the prior art reference components can be used to construct a device substantially equivalent to the claim at issue. This last step generally encompasses two sub-steps: (1) adducement of objective evidence teaching how to modify the prior art components to achieve the individual elements of the claim at issue; and (2) adducement of objective evidence teaching how to combine the modified

[14] An invention, as embodied in the claims, is rendered obvious if an Examiner concludes that although the claimed invention is not identically disclosed or described in a reference, the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. *MPEP* § 2141 (citing 35 U.S.C. § 103).

individual components such that the claim at issue, as a whole, is achieved. *MPEP* § 2141; *MPEP* § 2143. Each of these foregoing elements is further defined within the MPEP. *Id.*

This requirement has been explained recently by the Supreme Court in *KSR v. Teleflex,* 550 U.S. 398; 127 S. Ct. 1727 (2007) which noted that such a rejection requires "some articulated reasoning ... to support the legal conclusion of obviousness." As stated by the Court, obviousness can be established where "there was an apparent reason to combine the known elements in the fashion claimed by the patent at issue. To facilitate review, ***this analysis should be made explicit***." (emphasis added). *See* In re Kahn, 441 F. 3d 977, 988 (CA Fed. 2006) ('[R]ejections on obviousness grounds cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness.')." *KSR v. Teleflex,* 550 U.S. 398; 127 S. Ct. 1727 at 1741.

As further described by the Court ***"[A] patent composed of several elements is not proved obvious merely by demonstrating that each of its elements was, independently, known in the prior art.*** Although common sense directs one to look with care at a patent application that claims as innovation the combination of two known devices according to their established functions, it can be important to identify a reason that would have prompted a person of ordinary skill in the relevant field to combine the elements in the way the claimed new invention does. This is so because inventions in most, if not all, instances rely upon building blocks long since uncovered, and claimed discoveries almost of necessity will be combinations of what, in some sense, is already known." *KSR v. Teleflex,* 550 U.S. 398; 127 S. Ct. 1727 at 1741.

a) Interpreting a Claim at Issue

With respect to interpreting a claim at issue, the MPEP directs that, during examination — as opposed to subsequent to issue — the pending claims must be "given their broadest reasonable interpretation consistent with the specification." MPEP § 2111. The Federal Circuit's *en banc* decision in *Phillips v. AWH Corp.*,

415 F.3d 1303 (Fed. Cir. 2005) expressly recognized that the USPTO employs the "broadest reasonable interpretation consistent with the specification" standard:

> The [PTO] determines the scope of claims in patent applications not solely on the basis of the claim language, but upon giving claims their broadest reasonable construction "in light of the specification as it would be interpreted by one of ordinary skill in the art." *In re Am. Acad. of Sci. Tech. Ctr.*, 367 F.3d 1359, 1364 (Fed. Cir. 2004). Indeed, the rules of the PTO require that application claims must "conform to the invention as set forth in the remainder of the specification and the terms and phrases used in the claims must find clear support or antecedent basis in the description so that the meaning of the terms in the claims may be ascertainable by reference to the description." 37 CFR 1.75(d)(1).

Phillips at 1316. See also *In re Hyatt*, 211 F.3d 1367, 1372 (Fed. Cir. 2000) and MPEP § 2111.

In addition, it is the PTO's responsibility to interpret the claims during prosecution. *See In re Morris*, 127 F.3d 1048, 1054-55 (Fed. Cir. 1997) (the "PTO applies to verbiage of the proposed claims the broadest reasonable meaning of the words in their ordinary usage as they would be understood by one of ordinary skill in the art, taking into account whatever enlightenment by way of definitions or otherwise that may be afforded by the written description contained in applicant's specification."). See also Examination Guidelines For Determining Obviousness Under 35 U.S.C. § 103: MPEP § 2141, II, A.: "The scope of the claimed invention must be clearly determined by giving the claims the 'broadest reasonable interpretation consistent with the specification.' *See Phillips v. AWH Corp.*, 415 F.3d 1303, 1316, 75 USPQ2d 1321, 1329 (Fed. Cir. 2005) and MPEP § 2111."

b) Definition of One or More Prior Art Reference Components Relevant to the Claim at Issue

Once the claim at issue has been properly interpreted, the next step is the definition of one or more prior art reference components (*e.g.*, electrical, mechanical, or other components set forth in a prior art reference) relevant to the

properly interpreted claim at issue. With respect to the definition of one or more prior art reference components relevant to the claim at issue, the MPEP defines three proper sources of such prior art reference components, with the further requirement that each such source must have been extant at the time of invention to be considered relevant. These three sources are as follows: patents as defined by 35 U.S.C. § 102, printed publications as defined by 35 U.S.C. § 102, and information (*e.g.*, scientific principles) deemed to be "well known in the art"[15] as defined under 35 U.S.C. § 102. *MPEP* § 2141; *MPEP* § 2144.

c) Ascertainment of Differences between Prior Art Reference Components and Claim at Issue; Teaching to Modify and/or Combine Prior Art Reference Components to Remedy Those Differences in Order to Achieve Recitations of Claim at Issue

With one or more prior art components so defined and drawn from the proper prior art sources, the differences between the one or more prior art reference components and the elements of the claim at issue are to be ascertained. Thereafter, in order to establish a case of *prima facie* obviousness, an examiner must set forth a rationale, supported by objective evidence[16] sufficient to demonstrate under a preponderance of the evidence standard, that in the prior art extant at the time of invention there was a teaching to modify and/or combine the one or more prior art

[15] The fact that information deemed to be "well known in the art" can serve as a proper source of prior art reference components seems to open the door to subjectivity, but such is not the case. As a remedy to this potential problem, *MPEP* § 2144.03 states that if an Examiner asserts that his position is derived from and/or is supported by a teaching or suggestion that is alleged to have been "well known in the art," and that if an applicant traverses such an assertion (that something was "well known within the art"), the Examiner must cite a reference in support of his or her position. The same MPEP section also states that when a rejection is based on facts within the personal knowledge of an Examiner, the data should be stated as specifically as possible, and the facts must be supported, when called for by the applicant, by an affidavit from the Examiner. Such an affidavit is subject to contradiction or explanation by the affidavits of the applicant and other persons. *Id.* Thus, all sources of prior art reference components must be objectively verifiable.

[16] The proper sources of the objective evidence supporting the rationale are the defined proper sources of prior art reference components, discussed above, with the addition of factually similar legal precedent. *MPEP* § 2144.

reference components to construct a device practicably equivalent to the claim at issue.

In *Kotzab*, insofar as the cited Evans reference did not directly disclose/recite as alleged by the Board, and since the Board did not supply evidence supporting its contention that "one system" is equal to "one sensor," the Federal Circuit reversed the rejection for lack of "necessary substantial evidence to support a rejection," stating as follows:

> The Examiner cites Evans for teaching that "one system constructed and operated according to the invention may be used to control a number of valves." Evans application, p. 19, ll. 6-8 (emphasis added). In view of this disclosure only, the Examiner concluded that Evans teaches the use of one sensor to control a number of valves. This conclusion must necessarily rest on the unstated premise by the Examiner that "one system" is equal to "one sensor."
>
> But the Board's decision, adopting the Examiner's premise, lacks the necessary substantial evidence to support a rejection of Kotzab's claims. Specifically, there is not substantial evidence to show that "one system" is the same thing as "one sensor." The words "sensor" and "probe" are used throughout Evans to refer to the device that measures the mold temperature. ... Evans clearly never uses the term "system" as a substitute for the simple temperature measuring device it calls "sensor." And, the Board made no reference to any evidence in the record that would equate "one system" with "one sensor."
>
> As mentioned previously, more than a mere scintilla of evidence is necessary to support the Board's implicit conclusion that "one system" is equal to "one sensor." Based on the entirety of Evans' disclosure, we cannot say that there is such relevant evidence as a reasonable mind might accept as adequate to support the conclusion that "one system" means "one sensor."

See id., 217 F.3d 1365, 1370-71 (Fed. Cir. 2000) (emphasis added).

The preferable evidence relied upon is an express teaching to modify/combine within the properly defined objectively verifiable sources of prior art. In the absence of such express teaching, an examiner may attempt to establish a rationale to support a finding of such teaching reasoned from, or based upon, express teachings taken from the defined proper sources of such evidence

(*i.e.*, properly defined objectively verifiable sources of prior art). *MPEP* § 2144; *In re Dembiczak*, 50 U.S.P.Q.2d 1614 (Fed. Cir. 1999).

The MPEP recognizes the pitfalls associated with the tendency to subconsciously use impermissible "hindsight" when an examiner attempts to establish such a rationale. The MPEP has set forth at least two rules to ensure against the likelihood of such impermissible use of hindsight. The first rule is that:

> under 35 U.S.C. 103, the examiner must step backward in time and into the shoes worn by the hypothetical "person of ordinary skill in the art" when the invention was unknown and just before it was made. In view of all factual information,[17] the examiner must then make a determination whether the claimed invention "as a whole" would have been obvious at that time to that person. Knowledge of an Applicant's disclosure must be put aside in reaching this determination, yet kept in mind in order to determine the "differences," conduct the search, and evaluate the "subject matter as a whole" of the invention. The tendency to resort to "hindsight" based upon an Applicant's disclosure is often difficult to avoid due to the very nature of the examination process. However, impermissible hindsight must be avoided and the legal conclusion must be reached on the basis of the facts gleaned from the prior art.

MPEP § 2142 (emphasis added). Thus, if the only objective evidence of such teaching to modify and/or combine prior art reference components is an applicant's disclosure, no evidence of such teaching exists.[18]

The second rule is that if an examiner attempts to rely on some advantage or expected beneficial result that would have been produced by a modification and/or combination of the prior art reference components as evidence to support a rationale to establish such teachings to modify and/or combine prior art reference components, the MPEP requires that such advantage or expected beneficial result

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[17] "Factual information" is information actually existing or occurring, as distinguished from mere supposition or opinion. *Black's Law Dictionary* 532 (5th ed. 1979).

[18] An applicant may argue that an Examiner's conclusion of obviousness is based on improper hindsight reasoning. However, "[a]ny judgment on obviousness is in a sense necessarily a reconstruction based on hindsight reasoning, but so long as it takes into account only knowledge which was within the level of ordinary skill in the art at the time the claimed invention was made and does not include knowledge gleaned only from applicant's disclosure, such a reconstruction is proper." *MPEP* § 2145(X)(A) (emphasis added).

be objectively verifiable teachings present in the acceptable sources of prior art (or drawn from a convincing line of reasoning based on objectively verifiable established scientific principles or teachings). *MPEP* § 2144. Thus, as a guide to avoid the use of impermissible hindsight, these rules from the MPEP make clear that absent some objective evidence, sufficient to persuade under a preponderance of the evidence standard, no teaching of such modification and/or combination exists.[19]

B. Technical Material Cited by the USPTO Does Not Show/Suggest Recitations of Independent Claim 1 and Dependent Claims 2-25 as Presented Herein; Notice of Allowance of Same Respectfully Requested

[19] *In Re Sang Su Lee* 277 F.3d 1338 (Fed. Cir. 2002) ("When patentability turns on the question of obviousness, the search for and analysis of the prior art includes evidence relevant to the finding of whether there is a teaching, motivation, or suggestion to select and combine the references relied on as evidence of obviousness.") *See, e.g., McGinley v. Franklin Sports, Inc.*, 262 F.3d 1339, 1351-52, 60 U.S.P.Q.2d 1001, 1008 (Fed. Cir. 2001) ("the central question is whether there is reason to combine [the] references," a question of fact drawing on the *Graham* factors). *"The factual inquiry whether to combine references must be thorough and searching." Id. It must be based on objective evidence of record. This precedent has been reinforced in myriad decisions, and cannot be dispensed with. See, e.g., Brown & Williamson Tobacco Corp. v. Philip Morris Inc.*, 229 F.3d 1120, 1124-25, 56 U.S.P.Q.2d 1456, 1459 (Fed. Cir. 2000) ("a showing of a suggestion, teaching, or motivation to combine the prior art references is an 'essential component of an obviousness holding'") (quoting *C.R. Bard, Inc., v. M3 Systems, Inc.*, 157 F.3d 1340, 1352, 48 U.S.P.Q.2d 1225, 1232 (Fed. Cir. 1998)); *In re Dembiczak*, 175 F.3d 994, 999, 50 U.S.P.Q.2d 1614, 1617 (Fed. Cir. 1999) ("Our case law makes clear that the best defense against the subtle but powerful attraction of a hindsight-based obviousness analysis is rigorous application of the requirement for a showing of the teaching or motivation to combine prior art references."); *In re Dance*, 160 F.3d 1339, 1343, 48 U.S.P.Q.2d 1635, 1637 (Fed. Cir. 1998) (there must be some motivation, suggestion, or teaching of the desirability of making the specific combination that was made by the applicant); *In re Fine*, 837 F.2d 1071, 1075, 5 U.S.P.Q.2d 1596, 1600 (Fed. Cir. 1988) ("'teachings of references can be combined only if there is some suggestion or incentive to do so.'") (emphasis in original) (quoting *ACS Hosp. Sys., Inc. v. Montefiore Hosp.*, 732 F.2d 1572, 1577, 221 U.S.P.Q. 929, 933 (Fed. Cir. 1984)). The need for specificity pervades this authority. *See, e.g., In re Kotzab*, 217 F.3d 1365, 1371, 55 U.S.P.Q.2d 1313, 1317 (Fed. Cir. 2000) ("particular findings must be made as to the reason the skilled artisan, with no knowledge of the claimed invention, would have selected these components for combination in the manner claimed"); *In re Rouffet*, 149 F.3d 1350, 1359, 47 U.S.P.Q.2d 1453, 1457-58 (Fed. Cir. 1998) ("even when the level of skill in the art is high, the Board must identify specifically the principle, known to one of ordinary skill, that suggests the claimed combination. In other words, the Board must explain the reasons one of ordinary skill in the art would have been motivated to select the references and to combine them to render the claimed invention obvious.")).

1. Independent Claim 1

Independent Claim 1 recites as follows:

> A method comprising:
>
> [a] publishing a schedule of content transmission, the schedule being defined in response to an order in which the at least one content is spatially resident upon at least one hardware spatial data storage system, the schedule identifying the content by one or more times;
>
> [b] reading at least one content from the at least one hardware spatial data storage system in a fashion independent of the schedule of content transmission; and
>
> [c] transmitting the at least one content to a temporal data storage system in accord with the published schedule.[20]

As shown following, (1) the USPTO-cited material fails to recite several express recitations of these claims; (2) the USPTO is asserting that each cited reference "teaches" at least some of the text of Independent Claim 1, but has not provided any objectively verifiable evidence supporting these assertions; and (3) the USPTO has failed to adduce objective evidence of how to modify/combine the cited art to match the recitations of Independent Claim 1. Moreover, Applicant maintains that such modifications/combinations would change the principle of operation of the cited art and/or render its components unfit for their intended purpose.

a) The USPTO-Cited Technical Material Fails to Recite Several Express Terms of Independent Claim 1 and Therefore the USPTO Has Not Met Its Burden to Establish a *Prima Facie* Case of Unpatentability for Independent Claim 1

Concerning this, the USPTO has recently stated as follows:

[20] The lettering of the clauses herein is merely for sake of clarity of argument and should not be taken to imply any particular ordering of the clauses.

6 **As per claims 1 and 26**, but more specifically claim 1, Miller discloses a method comprising:

publishing a schedule of content transmission, the schedule identifying the content by one or more times (col. 3, lines 1-2; col. 13, lines 4-9; Fig. 3, element 114);

transmitting the at least one content to a temporal data storage system in accord with the published schedule (col. 3, lines 3-8; col. 13, lines 10-13; Fig. 3, element 116; col. 5, lines 30-46; Fig. 1, elements 16, 18, 20, Fig. 2, element 46). *It should be noted that the "tape drives" within the "replicated servers" are analogous to a "temporal data storage system."*

Miller does not disclose reading at least one content from at least one hardware spatial data storage system in a fashion independent of the schedule of content transmission.

Jaeger discloses reading at least one content from at least one hardware spatial data storage system in a fashion independent of the schedule of content transmission (col. 5, lines 49-52; col. 2, lines 41-45; Fig. 1, element 11). *It should be noted that the "data signals/tracks" are analogous to the "at least one content" and that the "disk drive" is analogous to a "hardware spatial data storage system."*

Miller and Jaeger are analogous art because they are from the same field of endeavor, that being data transmission.

At the time of the invention it would have been obvious to a person of ordinary skill in the art to implement Jaeger's reordering of data signals within Miller's content source's hard disk drives because all the claimed elements were known in the prior art and one skilled in the art could have combined the elements as claimed by known methods with no change in their respective functions, and the combination would have yielded the predictable results of maximizing the number of data signals that can be transmitted from a disk drive by minimizing seek time of the disk drive head.

The combination of Miller/Jaeger does not disclose the schedule being defined in response to an order in which the at least one content is spatially resident upon at least one hardware spatial data storage system.

Ma discloses the schedule being defined in response to an order in which the at least one content is spatially resident upon at least one hardware spatial data storage system (col. 9, lines 10-22; col. 10, lines 43-60; Figs. 4 and 5). *It should be noted that "disk-based storage system 14" is equivalent to the "hardware spatial data storage system". It should also be noted that the schedules in Fig. 5 are defined in response to the location of data in the disk-based storage system. The location of data in the disk-based storage system dictates the order of data in the disk-based storage system. Therefore, it follows that the schedules in Fig. 5 are also defined in response to the order of the data in the disk-based storage system.*

The combination of Miller/Jaeger and Ma are analogous art because they are from the same field of endeavor, that being data transmission.

At the time of the invention it would have been obvious to a person of ordinary skill in the art to apply Ma's scheduling technique to Miller/Jaeger's distribution schedule. The motivation for doing so would have been to provide sequential-like parallel retrieval suitable for supporting real-time multimedia data distribution for large numbers of clients.

Office Action, pp. 3-5 (5 October 2009). [21]

As set forth above, Independent Claim 1 recites as follows: "A method comprising: [a] publishing a schedule of content transmission, the schedule being defined in response to an order in which the at least one content is spatially resident upon at least one hardware spatial data storage system, the schedule identifying the content by one or more times; [b] reading at least one content from the at least one

[21] Applicant respectfully asserts that the USPTO has apparently not examined the recitations of Applicant's claims, but appears to have not addressed the express language of both Applicant's claims and the cited technical material. Accordingly, Applicant respectfully maintains that the USPTO has not established a *prima facie* case of the unpatentability of any pending claim for at least this reason. Notwithstanding the foregoing, Applicant demonstrates herein that even if the USPTO had followed the MPEP examination guidelines, no *prima facie* case of unpatentability would be extant.

hardware spatial data storage system in a fashion independent of the schedule of content transmission; and [c] transmitting the at least one content to a temporal data storage system in accord with the published schedule."[22]

It appears to Applicant that the USPTO has mapped "[a] publishing a schedule of content transmission, the schedule being defined in response to an order in which the at least one content is spatially resident upon at least one hardware spatial data storage system, the schedule identifying the content by one or more times" onto a configuration by which *"The distribution schedules that can be accommodated are then transmitted to certain of the requesting content sources."* (Emphasis modified.) Applicant notes that the USPTO has not explained how it reaches such mappings under the broadest reasonable interpretation framework as is the USPTO's burden (e.g., such as by examples drawn from Applicant's claims or detailed description),[23] and furthermore, Applicant points out that this mapping does not address at least the "the schedule identifying the content by one or more times."

In view of the foregoing, Applicant points out that although Independent Claim 1 has been quoted in the present rejection, several claim terms have not been addressed in its analysis. Because the USPTO-cited material fails to recite at least the foregoing bolded recitations of Independent Claim 1,[24] under the MPEP guidelines as set forth above, such material does not establish a *prima facie* case of the unpatentability of Independent Claim 1. For these reasons, Applicant

[22] The lettering of the clauses herein is merely for sake of clarity of argument and should not be taken to imply any particular ordering of the clauses.

[23] Irrespective of a desire to be cooperative, the ability of any patent practitioner to help the Examiner fulfill this burden on the record is tightly curtailed by pre- and post-issuance legal standards and by various ethical duties in tension. *See, e.g.,* 37 C.F.R. § 10.83 ("A practitioner should represent a client zealously within the bounds of the law."); 37 C.F.R. § 10.84 ("[A] practitioner shall not intentionally … [p]rejudice or damage a client during the course of a professional relationship, except as required under this [ethics] part."); and 37 C.F.R. § 10.76 ("A practitioner should represent a client competently."). For these and other reasons, this document notes instances in which the USPTO did not follow the prescribed rules rather than seeking to interpret claims and/or to adduce evidence on the USPTO's behalf.

[24] Although Independent Claim 1 has been quoted in the present rejection, several claim terms have not been addressed in its analysis, as shown below.

respectfully asks the USPTO to hold Independent Claim 1 allowable and to issue a Notice of Allowability of same.

b) The USPTO is Characterizing/Asserting U.S. Pat. No. 7,654,321 ("Miller") and/or U.S. Pat. No. 6,345,028 ("Jaeger") to "Teach" the Text of Independent Claim 1, But Does Not Support Its Characterization/Assertion, Therefore the USPTO Has Not Met Its Burden to Establish a *Prima Facie* Case of Unpatentability for Independent Claim 1

The USPTO has stated as follows:

> 6. As per claims 1 and 26, but more specifically claim 1, Miller discloses a method comprising;
>
> publishing a schedule of content transmission, the schedule identifying the content by one or more times (col. 3, lines 1-2, col. 13, lines 4-9; Fig. 3, element 114);
>
> transmitting the at least one content to a temporal data storage system in accord with the published schedule (col. 3, lines 3-8; col. 13, lines 10-13; Fig. 3, element 116; col. 5, lines 39-48; Fig. 1, elements 16, 18, 20; Fig. 2, element 46). *It should be noted that the "tape drives" within the "replicated servers" are analogous to a "temporal data storage system."*
>
> Miller does not disclose reading at least one content from at least one hardware spatial data storage system in a fashion independent of the schedule of content transmission

Jaeger discloses reading at least one content from at least one hardware spatial data storage system in a fashion independent of the schedule of content transmission (col. 5, lines 49-52; col. 2, lines 41-45; Fig. 1, element 11). *It should be noted that the "data signals/tracks" are analogous to the "at least one content" and that the "disk drive" is analogous to a "hardware spatial data storage system."*

Miller and Jaeger are analogous art because they are from the same field of endeavor, that being data transmission.

At the time of the invention it would have been obvious to a person of ordinary skill in the art to implement Jaeger's reordering of data signals within Miller's content source's hard disk drives because all the claimed elements were known in the prior art and one skilled in the art could have combined the elements as claimed by known methods with no change in their respective functions, and the combination would have yielded the predictable results of maximizing the number of data signals that can be transmitted from a disk drive by minimizing seek time of the disk drive head.

The combination of Miller/Jaeger does not disclose the schedule being defined in response to an order in which the at least one content is spatially resident upon at least one hardware spatial data storage system.

Ma discloses the schedule being defined in response to an order in which the at least one content is spatially resident upon at least one hardware spatial data storage system (col. 9, lines 10-22; col. 10, lines 43-60; Figs. 4 and 5). *It should be noted that "disk-based storage system 14" is equivalent to the "hardware spatial data storage system". It should also be noted that the schedules in Fig. 5 are defined in response to*

the location of data in the disk-based storage system. The location of data in the disk-based storage system dictates the order of data in the disk based storage system. Therefore, it follows that the schedules in Fig. 5 are also defined in response to the order of the data in the disk-based storage system.

The combination of Miller/Jaeger and Ma are analogous art because they are from the same field of endeavor, that being data transmission.

At the time of the invention it would have been obvious to a person of ordinary skill in the art to apply Ma's scheduling technique to Miller/Jaeger's distribution schedule. The motivation for doing so would have been to provide sequential-like parallel retrieval suitable for supporting real-time multimedia data distribution for large numbers of clients.

Office Action, pp. 3-5 (5 October 2009) (emphasis added). Applicant respectfully disagrees and traverses the rejection.

(1) The USPTO Has Put Forth No Evidence Supporting Its Characterization/Assertion That Miller "Teaches" Recitations of Independent Claim 1

Applicant respectfully points out that Applicant has reviewed the Miller reference identified by the USPTO, and so far as Applicant can discern, the Miller reference does not recite "the schedule identifying the content by one or more times" as recited in Applicant's Independent Claim 1.[25] Rather, the textual portions of Miller cited by the USPTO actually recite as follows:

3

The distribution schedules that can be accommodated are then transmitted to certain of the requesting content sources.

Miller at col. 3, lines 1-2.

[25] Nor does Jaeger and/or Ma recite as the USPTO alleges, for that matter; Applicant again points out that, in derogation of the MPEP guidelines, the USPTO has not addressed the language of Applicant's Independent Claim 1.

114. In this step, the scheduler **10** distributes transmission instructions to the content sources **12, 14**. These instructions include the time to start transmitting the content data to the replicated servers **16, 18, 20**, the transfer rate, typically in bits/second, the overage factor, and the multicast address assigned.

Miller at col. 13, lines 4-9.

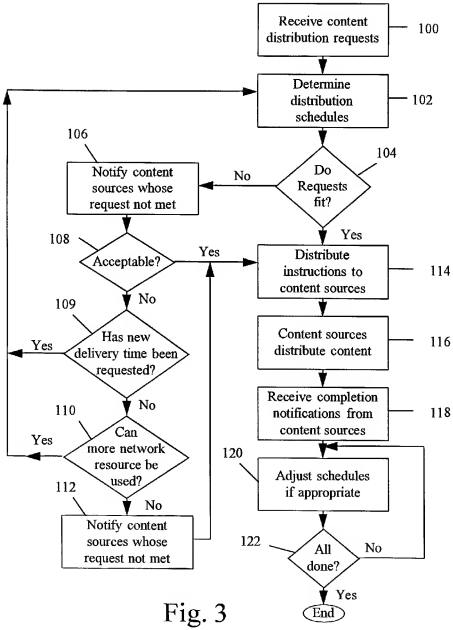

Fig. 3

Miller Fig. 3.

Each of the content sources begins a transmission, preferably a multicast transmission in accordance with the scheme described in the later-filed incorporated-by-reference copending patent application, to the replicated servers at the scheduled start time using the transfer rate set forth in the distribution schedule. After the content sources have trans-

Miller at col. 3, lines 3-8.

After receiving the above instructions, the content sources **12, 14** transmit content data at the scheduled time as shown in step **116**, for distribution to the replicated servers **16, 18, 20**. As the content sources **12, 14** finish transmitting the data

Miller at col. 13, lines 10-13.

of a variety of operating systems. Referring to FIG. **2**, the scheduler **10**, content sources **12, 14**, and replicated servers **16, 18, 20** each typically include a central processor **30**, a main memory **32** for storing programs and/or data, an input/output controller **34**, a network interface **36**, one or more input devices **38** such as a keyboard or mouse, a display device **40**, a fixed or hard disk drive unit **42**, a floppy disk drive unit **44**, a tape drive unit **46**, and a data bus **48** coupling these components to allow communication therebetween. The content sources **12, 14**, and replicated servers

Miller at col. 5, lines 39-48.

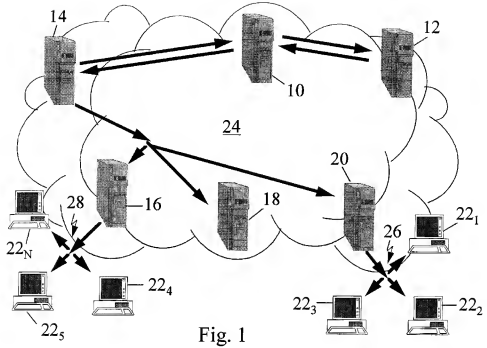

Fig. 1

Miller Fig.1.

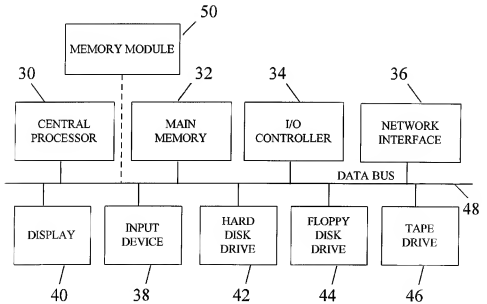

Fig. 2

Miller Fig. 2.

The USPTO is characterizing Miller to "teach" at least some of the text of Independent Claim 1, but does not support its characterization with objectively verifiable evidence. The USPTO has therefore not met its burden to establish a *prima facie* case of unpatentability for Independent Claim 1. What a reference "teaches" is a question of fact.[26,27,28] Conclusory statements that a reference "teaches" something beyond its bare recitations/direct disclosure do not constitute ANY evidence of such "teachings" unless they are supported by objective evidence. *See In re McNeil-PPC,* 2008-1546 (Fed. Cir. July 31, 2009);[29] *In re*

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[26] *See Rapoport v. Dement,* 254 F.3d 1053, 1060 (Fed. Cir. 2001) ("What a reference **teaches** is a question of fact... Therefore, we review the Board's **characterization** of the **disclosure** in the FPR Publication for **substantial evidence**.") (emphasis added).

[27] *In re Bell,* 991 F.2d 781 (Fed. Cir. 1993) (reversing the PTO and holding when the PTO presented no evidence to cure *prima facie* differences between patent claim and Examiner assertions regarding what the allegedly invalidating prior art "taught")

[28] Anticipation, as well as what a reference teaches, is a question of fact. *Teleflex, Inc. v. Ficosa N. Am. Corp.*, 299 F.3d 1313, 1323 (Fed. Cir. 2002).

[29] In *McNeil,* the Examiner had rejected claims reciting a tampon having "a generally cylindrical compressed, solid fibre core" and ribs "compressed less than the fiber core" in view of a Japanese patent application ("Sasaki"). McNeil appealed to the Board of Patent Appeals and Interferences, which "specifically found that 'Sasaki reasonably appears to depict a tampon having a generally cylindrical absorbent portion with a generally cylindrical compressed solid fiber core from which longitudinal ribs extend radially outward.' " *See id.,* 2008-1546, slip op. 1, 3 (Fed. Cir. July 31, 2009). In light of this and its finding that of each rib of Sasaki being "compressed less than the fiber core," the Board affirmed the rejections. Insofar that the Sasaki reference did not directly disclose/recite as alleged by the Board, and since the Board did not explain/supply evidence supporting its statement that "Sasaki reasonably appears to depict a tampon having a generally cylindrical absorbent portion with a generally cylindrical compressed solid fiber core from which longitudinal ribs extend radially outward," the Federal Circuit reversed the rejection for lack of "substantial evidentiary support," stating as follows:

> There is not substantial evidence, indeed, no evidence, that Sasaki discloses ribs "compressed less than the fiber core" or "a generally cylindrical compressed, solid fibre core." ... Just as the Sasaki figures do not indicate the relative compression of the different portions of the tampon, the Sasaki figures completely lack any indication of the relative coarseness of different portions. ... Lastly, turning to the issue of spacing of the ribs, Figure 8 shows a space between the bottommost ribs, and there is arguably some space shown between other ribs. However, because it is neither clear that Sasaki discloses a core nor which portions of Sasaki's tampon the Board considered to be the ribs and which the Board considered to be the core, we cannot say that substantial evidence supports the Board's determination that Sasaki discloses ribs separated from each other "at the proximal end by an amount greater than" than at "the distal end."

See id., 2008-1546, slip op. 1, 10-11 (Fed. Cir. July 31, 2009).

Lee, 277 F.3d 1338 (Fed. Cir. 2002);[30] *In re Kotzab*, 217 F.3d 1365, 1369 (Fed. Cir. 2000) ("Whether the Board relies on an express or an implicit showing, it must provide particular findings related thereto. … Broad conclusory statements standing alone are not "evidence.").[31] Even if the PTO personnel were to seek to support their characterizations with an expert witness affidavit, the law is that conclusory statements by an expert that a reference "teaches" something beyond its bare recitations/direct disclosure do not constitute ANY evidence of such "teachings" unless they are supported by objective documentary evidence.[32]

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[30] In *Lee,* the USPTO argued that, to the "common sense of a person of ordinary skill in the art," it was obvious that one could combine a prior patent for an on-screen television menu with an on-screen picture-quality adjustment for a video game played on a television illustrated in the game's handbook. The Federal Circuit ruled that obviousness must be based on "objective evidence of record." Finding no specific published suggestion in the record, the Federal Circuit ruled the invention patentable. *See id.,* 277 F.3d 1338, 1342-44, 61 USPQ2d 1430, 1433-34 (Fed. Cir. 2002) (describing the BPAI's obligation to develop an evidentiary basis for its factual findings to allow for meaningful judicial review under the substantial evidence standard).

[31] In *Kotzab*, the Federal Circuit reversed the BPAI as follows:

> The Examiner cites Evans for teaching that "one *system* constructed and operated according to the invention may be used to control a number of valves." Evans application, p. 19, ll. 6-8 (emphasis added). In view of this disclosure only, the Examiner concluded that Evans teaches the use of one *sensor* to control a number of valves. This conclusion must necessarily rest on the unstated premise by the Examiner that "one system" is equal to "one sensor."
>
> But the Board's decision, adopting the Examiner's premise, lacks the necessary substantial evidence to support a rejection of Kotzab's claims. Specifically, there is not substantial evidence to show that "one system" is the same thing as "one sensor." The words "sensor" and "probe" are used throughout Evans to refer to the device that measures the mold temperature. … Evans clearly never uses the term "system" as a substitute for the simple temperature measuring device it calls "sensor." And, the Board made no reference to any evidence in the record that would equate "one system" with "one sensor."
>
> As mentioned previously, more than a mere scintilla of evidence is necessary to support the Board's implicit conclusion that "one system" is equal to "one sensor." Based on the entirety of Evans' disclosure, we cannot say that there is such relevant evidence as a reasonable mind might accept as adequate to support the conclusion that "one system" means "one sensor."

See id., 217 F.3d 1365, 1370-71 (Fed. Cir. 2000) (underline added).

[32] *See Motorola, Inc. v. Interdigital Tech. Corp.,* 121 F.3d 1461, 1473 (Fed. Cir. 1997) ("The district court's holding misapprehends the rigors of anticipation. For a prior art reference to anticipate a claim, the reference must disclose each and every element of the claim with sufficient clarity to prove its existence in the prior art... **Although this disclosure requirement presupposes the knowledge of one skilled in the art of the claimed invention, that presumed knowledge**

Thus, when a party to a matter asserts that a reference "teaches" something beyond its bare recitations/direct disclosure, and that factual assertion is challenged by an opposite party, the law requires that the asserting party provide objective evidentiary support to "close the gap" between what the reference recites and the what the asserting party *alleges* the reference teaches; in the absence of such evidence, there should be no finding of fact in favor of the asserted teaching.[33,34,35,36] For each instance below in which the USPTO has made an unsupported characterization, Applicant accordingly requests that the USPTO either (1) withdraw the corresponding claim rejection or (2) provide an

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does not grant a license to read into the prior art reference teachings that are not there. An expert's conclusory testimony, unsupported by the documentary evidence, cannot supplant the requirement of anticipatory disclosure in the prior art reference itself.") (emphasis added); *see also Genzyme Corp. v. Atrium Med. Corp.*, 315 F. Supp. 2d 552, 563 (D. Del. 2004) ("For a patent to be anticipated, every element of a patent claim must appear in a single reference. **Other references and opinion may be used to reveal what the reference would have meant to those skilled in the art at the time of the invention.... For a prior art reference to anticipate a claim, the reference must disclose each and every element of the claim with sufficient clarity to prove its existence in the prior art. Presumed knowledge of one skilled in the art does not allow an expert to read into the reference elements that are not there.**") (emphasis added)

[33] *See Rapoport v. Dement* 254 f. 3rd 1053, 1060 (Fed. Cir. 2001) . In *Rapoport,* the Federal Circuit affirmed the Board's holding that a publication did not anticipate a claim, reasoning as follows (emphasis added):

> Having construed the disputed term in the interference count and affirmed the Board's interpretation, we can properly address the merits of Rapoport's anticipation argument. The Board found that the disclosure of the FPR Publication was limited to treatment of anxiety in patients suffering from sleep apnea with buspirone, and did not address treatment of the underlying sleep apnea disorder. What a reference **teaches** is a question of fact,.... There is no disclosure in the FPR Publication of tests in which buspirone is administered to patients suffering from sleep apnea with the intent to cure the underlying condition.... The Board also correctly found that the FPR Publication does not show administering buspirone in any specific amounts to patients suffering from sleep apnea,... We note that there is no mention in the FRP Publication of administering buspirone to a patient at bedtime.... Therefore, for all the reasons stated above, we find that the Board's conclusion that the FPR Publication does not disclose administration of buspirone to patients suffering from sleep apnea to treat sleep apnea is supported by substantial evidence.

[34] *See In re Bell*, 991 F.2d 781 (Fed. Cir. 1993) (reversing the PTO's holding that a gene was "prima facie obvious over its corresponding protein" in the cited reference, absent any evidence of a one-to-one correspondence).

[35] *See In re McNeil-PPC*, 2008-1546 (Fed. Cir. July 31, 2009).

[36] *See In re Kotzab*, 217 F.3d 1365, 1369 (Fed. Cir. 2000).

affidavit setting forth objectively verifiable evidence sufficient to "close the gap" between the characterization and what the reference actually recites.

As can be seen from the foregoing, for example, the USPTO-identified portions of Miller do *not recite* the text of at least Clause [a] of Independent Claim 1: "the schedule identifying the content by one or more times."[37] Instead, Miller indicates "In this step, the scheduler 10 distributes transmission instructions to the content sources 12, 14. These instructions include the time to start transmitting the content data to the replicated servers 16, 18, 20, the transfer rate, typically in bits/second, the overage factor, and the multicast address assigned." Miller at col. 13, lines 4-9.

Also as noted above at page 42 *et seq.*, the USPTO has asserted that the Miller reference "*The distribution schedules that can be accommodated are then transmitted to certain of the requesting content sources.*" (emphasis added). Applicant respectfully traverses this assertion and notes that the Miller reference actually indicates "The transmission of data (e.g., a computer file) from one or more content sources over a network to one or more replicated servers is scheduled and performed according to the schedule. The content sources request the schedule from a network resource scheduler. The scheduler receives the requests and determines if and how the various requests can be accommodated. The scheduler determines at least a start time and a transfer rate for each of the content sources that can be accommodated."[38] (Miller Abstract.) To Applicant, it appears that the USPTO has tried to close a significant gap between these actual recitations of the Miller reference and the structure of "[a] publishing a schedule of content transmission, the schedule being defined in response to an order in which the at least one content is spatially resident upon at least one hardware spatial data storage system, the schedule identifying the content by one or more

[37] Neither do the USPTO-identified portions of Jaeger and/or Ma recite "the schedule identifying the content by one or more times," as recited in Clause [a].

[38] Thus, Miller does not recite that the requesting content sources identify their data. The schedule instead determines a start time and a transfer rate for each of content sources that can be accommodated. As such, the content of the content sources is not identified.

times" (of Applicant's Claim 1) without providing any evidence, by merely making this unsupported assertion.

Applicant has shown by direct quotations that Independent Claim 1 and the Miller reference are very different on their faces. *See supra* at p. 38 (quotation of Claim 1); and at p. 44 *et seq.* (quotation of Miller). Insofar that Applicant has shown that *"at first sight; on the first appearance; on the face of it; so far as can be judged from the first disclosure"* the USPTO-cited art is very different from Claim 1, and Applicant has noted that the USPTO has not cited to any objectively verifiable evidence/argument based on same sufficient to remedy such *prima facie* differences, the USPTO-cited technical material does not establish a *prima facie* case of the unpatentability of Claim 1 either under the MPEP or under controlling legal standards. *See supra* at pp. 24–37.

Accordingly, insofar as that Miller does not recite the text of at least Clause [a] of Applicant's Independent Claim 1, and insofar as that the USPTO has provided no objectively verifiable evidence, or argument based on objectively verifiable evidence, as to how Miller could be modified/combined to teach at least Clause [a] of Independent Claim 1, Applicant respectfully points out that under the MPEP guidelines as set forth above, the USPTO-cited technical material does not a establish a *prima facie* case of the unpatentability of Independent Claim 1 for at least these reasons. Thus, Applicant respectfully asks the USPTO to hold Independent Claim 1 allowable and to issue a Notice of Allowability of same.

With respect to the USPTO assertions regarding the teachings of Miller, Applicant demonstrated above that the express recitations of Miller are not as the USPTO alleges, and that the USPTO has provided no evidence—let alone the preponderance of the evidence required—to support the USPTO assertions as to the factual conclusion as to what Miller "teaches." Accordingly, Applicant respectfully points out that in view of the foregoing, the USPTO has presented no evidence that Miller teach as asserted by the USPTO. In addition, Applicant respectfully points out that even if the USPTO's assertions regarding the

teachings of Miller were supported, such would be of no moment in that the USPTO has yet to connect the alleged teaching of Miller to the actual express language of Applicant's Independent Claim 1. Under the MPEP guidelines as set forth above, the cited art of record fails to establish a *prima facie* case of unpatentability for at least these reasons. Accordingly, for at least the foregoing reasons, Applicant respectfully requests that the USPTO hold Independent Claim 1 allowable and issue a Notice of Allowability of same.

(2) The USPTO Characterization/Assertion Appears to be Based on Inadvertent Impermissible Hindsight, Personal Knowledge, or Official Notice; Applicant Requests Issuance of Notice of Allowability

Given that Applicant has shown, above, what Miller actually recite, the question thus naturally arises as to how the USPTO saw Miller as "teaching" something related to Clause [a] and/or Clause [b] of Independent Claim 1. Applicant respectfully points out that the Applicant's Application is the only objectively verifiable USPTO-cited document of record that shows or suggests what the USPTO purports the references to teach. From this and the express recitations of Miller as set forth, it follows that the USPTO is interpreting Miller through the lens of Applicant's application, which is impermissible hindsight use. Thus, at present, the USPTO's assertions regarding Miller are untenable. Under the MPEP guidelines as set forth above, the cited art of record fails to establish a *prima facie* case of unpatentability for at least these reasons. Accordingly, for at least the foregoing reasons, Applicant respectfully requests that the USPTO hold Independent Claim 1 allowable and issue a Notice of Allowability of same.

As the USPTO has provided no objectively verifiable evidence, nor argument based on objectively verifiable evidence, in support of the USPTO assertions regarding what the technical material cited by the USPTO "teaches,"

Applicant infers that the USPTO is relying on "personal knowledge" and/or is taking "official notice" of one or more factors to reach the factual conclusion of what the cited technical material "teaches." In view of the foregoing, if the USPTO desires to maintain the rejection, in the next communication, Applicant respectfully requests that the USPTO provide an affidavit or declaration setting forth objectively verifiable evidence in support of the USPTO's currently unsupported assertions regarding what the cited technical material "teaches" and/or should be interpreted to "teach." *See, e.g.*, MPEP § 2144.03(C), *If Applicant Challenges a Factual Assertion as Not Properly Officially Noticed or Not Properly Based Upon Common Knowledge, the Examiner Must Support the Finding with Adequate Evidence*, and 37 C.F.R. 1.104(d)(2).

(3) The USPTO Has Put Forth No Evidence Supporting Its Characterization/Assertion That Jaeger "Teaches" Recitations of Independent Claim 1

As noted above, the USPTO has stated as follows:

6 **As per claims 1 and 26**, but more specifically claim 1, Miller discloses a method comprising:

publishing a schedule of content transmission, the schedule identifying the content by one or more times (col. 3, lines 1-2; col. 13, lines 4-9; Fig. 3, element 114);

transmitting the at least one content to a temporal data storage system in accord with the published schedule (col. 3, lines 3-8; col. 13, lines 10-13; Fig. 3, element 116; col. 5, lines 30-46; Fig. 1, elements 16, 18, 20, Fig. 2, element 46). *It should be noted that the "tape drives" within the "replicated servers" are analogous to a "temporal data storage system."*

Miller does not disclose reading at least one content from at least one hardware spatial data storage system in a fashion independent of the schedule of content transmission.

Jaeger discloses reading at least one content from at least one hardware spatial data storage system in a fashion independent of the schedule of content transmission (col. 5, lines 49-52; col. 2, lines 41-45; Fig. 1, element 11). *It should be noted that the "data signals/tracks" are analogous to the "at least one content" and that the "disk drive" is analogous to a "hardware spatial data storage system."*

Miller and Jaeger are analogous art because they are from the same field of endeavor, that being data transmission.

At the time of the invention it would have been obvious to a person of ordinary skill in the art to implement Jaeger's reordering of data signals within Miller's content source's hard disk drives because all the claimed elements were known in the prior art and one skilled in the art could have combined the elements as claimed by known methods with no change in their respective functions, and the combination would have yielded the predictable results of maximizing the number of data signals that can be transmitted from a disk drive by minimizing seek time of the disk drive head.

The combination of Miller/Jaeger does not disclose the schedule being defined in response to an order in which the at least one content is spatially resident upon at least one hardware spatial data storage system.

Ma discloses the schedule being defined in response to an order in which the at least one content is spatially resident upon at least one hardware spatial data storage system (col. 9, lines 10-22; col. 10, lines 43-60; Figs. 4 and 5). *It should be noted that "disk-based storage system 14" is equivalent to the "hardware spatial data storage system". It should also be noted that the schedules in Fig. 5 are defined in response to the location of data in the disk-based storage system. The location of data in the disk-based storage system dictates the order of data in the disk-based storage system. Therefore, it follows that the schedules in Fig. 5 are also defined in response to the order of the data in the disk-based storage system.*

The combination of Miller/Jaeger and Ma are analogous art because they are from the same field of endeavor, that being data transmission.

At the time of the invention it would have been obvious to a person of ordinary skill in the art to apply Ma's scheduling technique to Miller/Jaeger's distribution schedule. The motivation for doing so would have been to provide sequential-like parallel retrieval suitable for supporting real-time multimedia data distribution for large numbers of clients.

Office Action, p. 3-5 (5 October 2009) (emphasis added).

Although the USPTO states "Jaeger discloses reading at least one content from at least one hardware spatial data storage system," Applicant has pointed out above that the USPTO has not engaged in the broadest reasonable interpretation framework regarding Clause [a], and accordingly has not addressed at least the "the schedule identifying the content by one or more times" recitations of Clause [a]. Accordingly, until the USPTO has supported its statement under the broadest reasonable interpretation framework Applicant here returns to the express language of the claim and thus respectfully points out that Applicant has reviewed the Jaeger reference identified by the USPTO, and so far as Applicant can discern, the Jaeger reference does not recite "the schedule

identifying the content by one or more times" as recited in Applicant's Independent Claim 1. Rather, the textual portions of Jaeger cited by the USPTO actually recite as follows:

> onto a disk drive. First, incremental temporal segments of each recorded audio track are read from the disk **11** in a predetermined numerical order, e.g., starting with track **1** and ending with the last recorded track (e.g., track N). The

Jaeger at col. 5, lines 49-52.

> like. Hereinafter, any reference to audio tracks, data tracks or video tracks will be presumed to include any and all audio signals, data signals, or video signals, whether or not they are specifically configured as tracks, and any reference to one is intended to encompass all.

Jaeger at col. 2, lines 41-45.

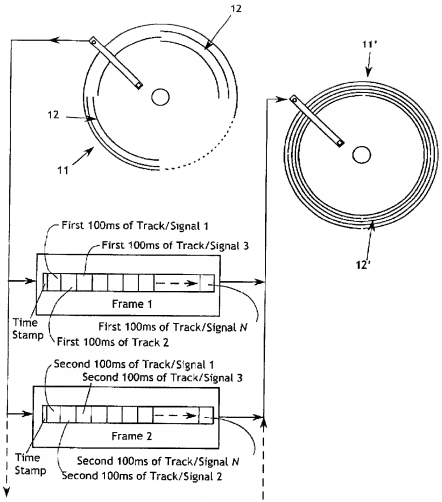

FIG. 1

Jaeger Fig. 1.

Additionally, the USPTO is characterizing Jaeger to "teach" at least some of the text of Independent Claim 1, but does not support its characterization with objectively verifiable evidence, therefore the USPTO has not met its burden to establish a *prima facie* case of unpatentability for Independent Claim 1. What a reference "teaches" is a question of fact.[39,40,41] Conclusory statements that a

[39] *See Rapoport v. Dement*, 254 F.3d 1053, 1060 (Fed. Cir. 2001) ("What a reference **teaches** is a question of fact... Therefore, we review the Board's **characterization** of the **disclosure** in the FPR Publication for **substantial evidence**.") (emphasis added).

[40] *In re Bell*, 991 F.2d 781 (Fed. Cir. 1993) (reversing the PTO and holding when the PTO presented no evidence to cure *prima facie* differences between patent claim and Examiner assertions regarding what the allegedly invalidating prior art "taught")

reference "teaches" something beyond its bare recitations/direct disclosure do not constitute ANY evidence of such "teachings" unless they are supported by objective evidence. *See In re McNeil-PPC,* 2008-1546 (Fed. Cir. July 31, 2009);[42] *In re Lee,* 277 F.3d 1338 (Fed. Cir. 2002);[43] *In re Kotzab*, 217 F.3d 1365, 1369 (Fed. Cir. 2000) ("Whether the Board relies on an express or an implicit showing, it must provide particular findings related thereto. … Broad conclusory statements standing alone are not "evidence.").[44] Even if the PTO personnel were

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[41] Anticipation, as well as what a reference teaches, is a question of fact. *Teleflex, Inc. v. Ficosa N. Am. Corp.*, 299 F.3d 1313, 1323 (Fed. Cir. 2002).

[42] In *McNeil,* the Examiner had rejected claims reciting a tampon having "a generally cylindrical compressed, solid fibre core" and ribs "compressed less than the fiber core" in view of a Japanese patent application ("Sasaki"). McNeil appealed to the Board of Patent Appeals and Interferences, which "specifically found that 'Sasaki reasonably appears to depict a tampon having a generally cylindrical absorbent portion with a generally cylindrical compressed solid fiber core from which longitudinal ribs extend radially outward.' " *See id.,* 2008-1546, slip op. 1, 3 (Fed. Cir. July 31, 2009). In light of this and its finding that of each rib of Sasaki being "compressed less than the fiber core," the Board affirmed the rejections. Insofar that the Sasaki reference did not directly disclose/recite as alleged by the Board, and since the Board did not explain/supply evidence supporting its statement that "Sasaki reasonably appears to depict a tampon having a generally cylindrical absorbent portion with a generally cylindrical compressed solid fiber core from which longitudinal ribs extend radially outward," the Federal Circuit reversed the rejection for lack of "substantial evidentiary support," stating as follows:

> There is not substantial evidence, indeed, no evidence, that Sasaki discloses ribs "compressed less than the fiber core" or "a generally cylindrical compressed, solid fibre core." ... Just as the Sasaki figures do not indicate the relative compression of the different portions of the tampon, the Sasaki figures completely lack any indication of the relative coarseness of different portions. ... Lastly, turning to the issue of spacing of the ribs, Figure 8 shows a space between the bottommost ribs, and there is arguably some space shown between other ribs. However, because it is neither clear that Sasaki discloses a core nor which portions of Sasaki's tampon the Board considered to be the ribs and which the Board considered to be the core, we cannot say that substantial evidence supports the Board's determination that Sasaki discloses ribs separated from each other "at the proximal end by an amount greater than" than at "the distal end."

See id., 2008-1546, slip op. 1, 10-11 (Fed. Cir. July 31, 2009).

[43] In *Lee,* the USPTO argued that, to the "common sense of a person of ordinary skill in the art," it was obvious that one could combine a prior patent for an on-screen television menu with an on-screen picture-quality adjustment for a video game played on a television illustrated in the game's handbook. The Federal Circuit ruled that obviousness must be based on "objective evidence of record." Finding no specific published suggestion in the record, the Federal Circuit ruled the invention patentable. *See id.,* 277 F.3d 1338, 1342-44, 61 USPQ2d 1430, 1433-34 (Fed. Cir. 2002) (describing the BPAI's obligation to develop an evidentiary basis for its factual findings to allow for meaningful judicial review under the substantial evidence standard).

[44] In *Kotzab*, the Federal Circuit reversed the BPAI as follows:

to seek to support their characterizations with an expert witness affidavit, the law is that conclusory statements by an expert that a reference "teaches" something beyond its bare recitations/direct disclosure do not constitute ANY evidence of such "teachings" unless they are supported by objective documentary evidence.[45] Thus, when a party to a matter asserts that a reference "teaches" something beyond its bare recitations/direct disclosure, and that factual assertion is challenged by an opposite party, the law requires that the asserting party provide objective evidentiary support to "close the gap" between what the reference

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> The Examiner cites Evans for teaching that "one *system* constructed and operated according to the invention may be used to control a number of valves." Evans application, p. 19, ll. 6-8 (emphasis added). In view of this disclosure only, the Examiner concluded that Evans teaches the use of one *sensor* to control a number of valves. This conclusion must necessarily rest on the unstated premise by the Examiner that "one system" is equal to "one sensor."
>
> But the Board's decision, adopting the Examiner's premise, lacks the necessary substantial evidence to support a rejection of Kotzab's claims. Specifically, there is not substantial evidence to show that "one system" is the same thing as "one sensor." The words "sensor" and "probe" are used throughout Evans to refer to the device that measures the mold temperature. ... Evans clearly never uses the term "system" as a substitute for the simple temperature measuring device it calls "sensor." And, the Board made no reference to any evidence in the record that would equate "one system" with "one sensor."
>
> As mentioned previously, more than a mere scintilla of evidence is necessary to support the Board's implicit conclusion that "one system" is equal to "one sensor." Based on the entirety of Evans' disclosure, we cannot say that there is such relevant evidence as a reasonable mind might accept as adequate to support the conclusion that "one system" means "one sensor."

See id., 217 F.3d 1365, 1370-71 (Fed. Cir. 2000) (underline added).

[45] *See Motorola, Inc. v. Interdigital Tech. Corp.,* 121 F.3d 1461, 1473 (Fed. Cir. 1997) ("The district court's holding misapprehends the rigors of anticipation. For a prior art reference to anticipate a claim, the reference must disclose each and every element of the claim with sufficient clarity to prove its existence in the prior art... **Although this disclosure requirement presupposes the knowledge of one skilled in the art of the claimed invention, that presumed knowledge does not grant a license to read into the prior art reference teachings that are not there. An expert's conclusory testimony, unsupported by the documentary evidence, cannot supplant the requirement of anticipatory disclosure in the prior art reference itself.**") (emphasis added); *see also Genzyme Corp. v. Atrium Med. Corp.,* 315 F. Supp. 2d 552, 563 (D. Del. 2004) ("For a patent to be anticipated, every element of a patent claim must appear in a single reference. **Other references and opinion may be used to reveal what the reference would have meant to those skilled in the art at the time of the invention.... For a prior art reference to anticipate a claim, the reference must disclose each and every element of the claim with sufficient clarity to prove its existence in the prior art. Presumed knowledge of one skilled in the art does not allow an expert to read into the reference elements that are not there.**") (emphasis added)

recites and the what the asserting party *alleges* the reference teaches; in the absence of such evidence, there should be no finding of fact in favor of the asserted teaching.[46,47,48,49] For each instance below in which the USPTO has made an unsupported characterization, Applicant accordingly requests that the USPTO either (1) withdraw the corresponding claim rejection or (2) provide an affidavit setting forth objectively verifiable evidence sufficient to "close the gap" between the characterization and what the reference actually recites.

As can be seen from the foregoing, for example, the USPTO-identified portions of Jaeger do *not recite* the text of at least Clause [a] of Independent Claim 1: "[a] publishing a schedule of content transmission, the schedule being defined in response to an order in which the at least one content is spatially resident upon at least one hardware spatial data storage system, the schedule identifying the content by one or more times." Instead, Jaeger recites "For playback, the composite frames are read from the recording system as a data stream that is loaded into memory, where each frame is read out, disassembled,

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[46] *See Rapoport v. Dement* 254 f. 3rd 1053, 1060 (Fed. Cir. 2001) . In *Rapoport*, the Federal Circuit affirmed the Board's holding that a publication did not anticipate a claim, reasoning as follows (emphasis added):

> Having construed the disputed term in the interference count and affirmed the Board's interpretation, we can properly address the merits of Rapoport's anticipation argument. The Board found that the disclosure of the FPR Publication was limited to treatment of anxiety in patients suffering from sleep apnea with buspirone, and did not address treatment of the underlying sleep apnea disorder. What a reference **teaches** is a question of fact,.... There is no disclosure in the FPR Publication of tests in which buspirone is administered to patients suffering from sleep apnea with the intent to cure the underlying condition.... The Board also correctly found that the FPR Publication does not show administering buspirone in any specific amounts to patients suffering from sleep apnea,... We note that there is no mention in the FRP Publication of administering buspirone to a patient at bedtime.... Therefore, for all the reasons stated above, we find that the Board's conclusion that the FPR Publication does not disclose administration of buspirone to patients suffering from sleep apnea to treat sleep apnea is supported by substantial evidence.

[47] *See In re Bell*, 991 F.2d 781 (Fed. Cir. 1993) (reversing the PTO's holding that a gene was "prima facie obvious over its corresponding protein" in the cited reference, absent any evidence of a one-to-one correspondence).

[48] *See In re McNeil-PPC*, 2008-1546 (Fed. Cir. July 31, 2009).

[49] *See In re Kotzab*, 217 F.3d 1365, 1369 (Fed. Cir. 2000).

and defined as separate signals corresponding to the plurality of signals that were initially recorded." (See Jaeger Abstract.) Consequently, on its face, Jaeger does not show the text of at least Clause [a] of Independent Claim 1.

Also as noted above at page 42 *et seq.*, the USPTO has asserted that the Jaeger reference teaches the schedule identifying the content by one or more times. Applicant respectfully traverses this assertion and notes that the Jaeger reference actually indicates "A process for recording and playing audio and/or data simultaneously from a recording medium includes the steps of initially acquiring a plurality of audio, video and/or data signals. Incremental temporal segments of each signal are taken and assembled into a single composite data frame in memory, and the composite frame is recorded in a permanent or an erasable recording system." (See Jaeger Abstract.) To Applicant, it appears that the USPTO has tried to close a significant gap between this actual recitation of the Jaeger reference and the "[a] publishing a schedule of content transmission, the schedule being defined in response to an order in which the at least one content is spatially resident upon at least one hardware spatial data storage system, the schedule identifying the content by one or more times" (in Clause [a] of Applicant's Claim 1) without providing any evidence, by merely making this unsupported assertion.

Applicant has shown by direct quotations that Independent Claim 1 and the Jaeger reference are very different on their faces. *See supra* at p. 38 (quotation of Claim 1); and at p. 57 *et seq.* (quotation of Jaeger). Insofar that Applicant has shown that *"at first sight; on the first appearance; on the face of it; so far as can be judged from the first disclosure"* the USPTO-cited art is very different from Claim 1, and Applicant has noted that the USPTO has not cited to any objectively verifiable evidence/argument based on same sufficient to remedy such *prima facie* differences, the USPTO-cited technical material does not establish a *prima facie* case of the unpatentability of Claim 1 either under the MPEP or under controlling legal standards. *See supra* at pp. 24–37.

Accordingly, insofar as that Jaeger does not recite the text of at least Clause [a] of Applicant's Independent Claim 1, and insofar as that the USPTO has provided no objectively verifiable evidence, or argument based on objectively verifiable evidence, as to how Jaeger could be modified/combined to teach at least Clause [a] of Independent Claim 1, Applicant respectfully points out that under the MPEP guidelines as set forth above, the USPTO-cited technical material does not a establish a *prima facie* case of the unpatentability of Independent Claim 1 for at least these reasons. Thus, Applicant respectfully asks the USPTO to hold Independent Claim 1 allowable and to issue a Notice of Allowability of same.

With respect to the USPTO assertions regarding the teachings of Jaeger, Applicant demonstrated above that the express recitations of Jaeger are not as the USPTO alleges, and that the USPTO has provided no evidence—let alone the preponderance of the evidence required—to support the USPTO assertions as to the factual conclusion as to what Jaeger "teaches." Accordingly, Applicant respectfully points out that in view of the foregoing, the USPTO has presented no evidence that Jaeger teach as asserted by the USPTO. In addition, Applicant respectfully points out that even if the USPTO's assertions regarding the teachings of Jaeger were supported, such would be of no moment in that the USPTO has yet to connect the alleged teaching of Jaeger to the actual express language of Applicant's Independent Claim 1. Under the MPEP guidelines as set forth above, the cited art of record fails to establish a *prima facie* case of unpatentability for at least these reasons. Accordingly, for at least the foregoing reasons, Applicant respectfully requests that the USPTO hold Independent Claim 1 allowable and issue a Notice of Allowability of same.

(4) The USPTO Characterization/Assertion Appears to be Based on Inadvertent Impermissible Hindsight, Personal Knowledge, or Official Notice; Applicant Requests Issuance of Notice of Allowability

Given that Applicant has shown, above, what Jaeger actually recite, the question thus naturally arises as to how the USPTO saw Jaeger as "teaching" something related to Clause [a] of Independent Claim 1. Applicant respectfully points out that the Applicant's Application is the only objectively verifiable USPTO-cited document of record that shows or suggests what the USPTO purports the references to teach. From this and the express recitations of Jaeger as set forth, it follows that the USPTO is interpreting Jaeger through the lens of Applicant's application, which is impermissible hindsight use. Thus, at present, the USPTO's assertions regarding Jaeger are untenable. Under the MPEP guidelines as set forth above, the cited art of record fails to establish a *prima facie* case of unpatentability for at least these reasons. Accordingly, for at least the foregoing reasons, Applicant respectfully requests that the USPTO hold Independent Claim 1 allowable and issue a Notice of Allowability of same.

As the USPTO has provided no objectively verifiable evidence, nor argument based on objectively verifiable evidence, in support of the USPTO assertions regarding what the technical material cited by the USPTO "teaches," Applicant infers that the USPTO is relying on "personal knowledge" and/or is taking "official notice" of one or more factors to reach the factual conclusion of what the cited technical material "teaches." In view of the foregoing, if the USPTO desires to maintain the rejection, in the next communication, Applicant respectfully requests that the USPTO provide an affidavit or declaration setting forth objectively verifiable evidence in support of the USPTO's currently unsupported assertions regarding what the cited technical material "teaches"

and/or should be interpreted to "teach." *See, e.g.*, MPEP § 2144.03(C), *If Applicant Challenges a Factual Assertion as Not Properly Officially Noticed or Not Properly Based Upon Common Knowledge, the Examiner Must Support the Finding with Adequate Evidence*, and 37 C.F.R. 1.104(d)(2).

(5) The USPTO Has Put Forth No Evidence Supporting Its Characterization/Assertion That Ma "Teaches" Recitations of Independent Claim 1

As noted above, the USPTO has stated as follows:

> 6 As per claims 1 and 26, but more specifically claim 1, Miller discloses a method comprising:
>
> publishing a schedule of content transmission, the schedule identifying the content by one or more times (col. 3, lines 1-2, col. 13, lines 4-9; Fig. 3, element 114);
>
> transmitting the at least one content to a temporal data storage system in accord with the published schedule (col. 3, lines 3-8; col. 13, lines 10-13; Fig. 3, element 116; col. 5, lines 30-48; Fig. 1, elements 16, 18, 20; Fig. 2, element 46). *It should be noted that the "tape drives" within the "replicated servers" are analogous to a "temporal data storage system."*
>
> Miller does not disclose reading at least one content from at least one hardware spatial data storage system in a fashion independent of the schedule of content transmission.

Jaeger discloses reading at least one content from at least one hardware spatial data storage system in a fashion independent of the schedule of content transmission (col. 5, lines 49-52; col. 2, lines 41-45; Fig. 1, element 11). *It should be noted that the "data signals/tracks" are analogous to the "at least one content" and that the "disk drive" is analogous to a "hardware spatial data storage system."*

Miller and Jaeger are analogous art because they are from the same field of endeavor, that being data transmission.

At the time of the invention it would have been obvious to a person of ordinary skill in the art to implement Jaeger's reordering of data signals within Miller's content source's hard disk drives because all the claimed elements were known in the prior art and one skilled in the art could have combined the elements as claimed by known methods with no change in their respective functions, and the combination would have yielded the predictable results of maximizing the number of data signals that can be transmitted from a disk drive by minimizing seek time of the disk drive head.

The combination of Miller/Jaeger does not disclose the schedule being defined in response to an order in which the at least one content is spatially resident upon at least one hardware spatial data storage system.

Ma discloses the schedule being defined in response to an order in which the at least one content is spatially resident upon at least one hardware spatial data storage system (col. 9, lines 10-22; col. 10, lines 43-60; Figs. 4 and 5). *It should be noted that "disk-based storage system 14" is equivalent to the "hardware spatial data storage system". It should also be noted that the schedules in Fig. 5 are defined in response to*

the location of data in the disk-based storage system. The location of data in the disk-based storage system dictates the order of data in the disk-based storage system. Therefore, it follows that the schedules in Fig. 5 are also defined in response to the order of the data in the disk-based storage system.

The combination of Miller/Jaeger and Ma are analogous art because they are from the same field of endeavor, that being data transmission.

At the time of the invention it would have been obvious to a person of ordinary skill in the art to apply Ma's scheduling technique to Miller/Jaeger's distribution schedule. The motivation for doing so would have been to provide sequential-like parallel retrieval suitable for supporting real-time multimedia data distribution for large numbers of clients.

Office Action, p. 3-5 (5 October 2009) (emphasis added).

Although the USPTO states "Ma discloses the schedule being defined in response to an order in which the at least one content is spatially resident upon at least one hardware spatial data storage system," Applicant has pointed out above that the USPTO has not engaged in the broadest reasonable interpretation framework regarding Clause [a], and accordingly has not addressed at least the "the schedule identifying the content by one or more times" recitations of Clause [a]. Accordingly, until the USPTO has supported its statement under the broadest reasonable interpretation framework Applicant here returns to the express language of the claim and thus respectfully points out that Applicant has reviewed the Ma reference identified by the USPTO, and so far as Applicant can discern, the Ma reference does not recite "the schedule identifying the content by one or more times" as recited in Applicant's Independent Claim 1. Rather, the textual portions of Ma cited by the USPTO actually recite as follows:

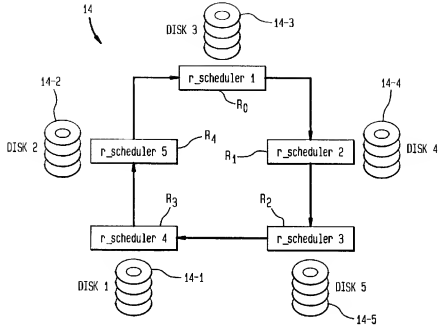
The present invention provides a data placement technique and corresponding retrieval scheduling technique. These techniques permit a sequential-like retrieval which minimizes disk seeking time in a server supporting multiple simultaneous subscribers. This sequential-like retrieval avoids the previously-noted problems associated with interleaving data retrievals which tend to result in a random-like retrieval performance and thereby limit the total number of simultaneous subscribers. The present invention provides sequential-like retrieval for a large number of subscribers by separating or "stripping" the data streams into portions, and storing or "scattering" the portions on the disks of storage subsystem **14** in accordance with a predetermined sequence.

Ma at col. 9, lines 10-22.

A media server in accordance with a preferred embodiment of the present invention also utilizes a retrieval scheduling technique illustrated in conjunction with FIGS. **4** and **5**. The retrieval scheduling specifies a sequence of scheduling intervals, also referred to herein as rounds, during which data streams for all requesting clients are read from the disks of the storage subsystem **14**. The data requested for a given stream in each scheduling interval is stored on the disks in one v_seg. Data streams with different bit rates will generally have different sized v_segs, but these different sized v_segs will typically correspond to the delivery time interval. The retrieval scheduling technique serves to parallelize the retrieval operation. In accordance with a preferred embodiment of the retrieval scheduling technique, each of the Y disks in the subsystem **14** utilizes a particular independent scheduler, referred to as an r_scheduler, during a given scheduling interval. A total of Y different r_schedulers are used for a storage subsystem with Y disks.

Ma at col. 10, lines 43-60.

FIG. 4



Ma Fig. 4.

FIG. 5

r_scheduler	GROUP	<DISK, ZONE> ACCESS BY TIME PERIOD										
		T_0	T_1	T_2	T_3	T_4	T_5	T_6	T_7	T_8	T_9	•••
R_0	0	<0, 0>	<1, 1>	<2, 2>	<0, 3>	<1, 0>	<2, 1>	<0, 2>	<1, 3>	<2, 0>	<0, 1>	•••
	1	<0, 1>	<1, 2>	<2, 3>	<0, 0>	<1, 1>	<2, 2>	<0, 3>	<1, 0>	<2, 1>	<0, 2>	•••
	2	<0, 2>	<1, 3>	<2, 0>	<0, 1>	<1, 2>	<2, 3>	<0, 0>	<1, 1>	<2, 2>	<0, 3>	•••
	3	<0, 3>	<1, 0>	<2, 1>	<0, 2>	<1, 3>	<2, 0>	<0, 1>	<1, 2>	<2, 3>	<0, 0>	•••
R_1	4	<1, 1>	<2, 2>	<0, 3>	<1, 0>	<2, 1>	<0, 2>	<1, 3>	<2, 0>	<0, 1>	<1, 2>	•••
	5	<1, 2>	<2, 3>	<0, 0>	<1, 1>	<2, 2>	<0, 3>	<1, 0>	<2, 1>	<0, 2>	<1, 3>	•••
	6	<1, 3>	<2, 0>	<0, 1>	<1, 2>	<2, 3>	<0, 0>	<1, 1>	<2, 2>	<0, 3>	<1, 0>	•••
	7	<1, 0>	<2, 1>	<0, 2>	<1, 3>	<2, 0>	<0, 1>	<1, 2>	<2, 3>	<0, 0>	<1, 1>	•••
R_2	8	<2, 2>	<0, 3>	<1, 0>	<2, 1>	<0, 2>	<1, 3>	<2, 0>	<0, 1>	<1, 2>	<2, 3>	•••
	9	<2, 3>	<0, 0>	<1, 1>	<2, 2>	<0, 3>	<1, 0>	<2, 1>	<0, 2>	<1, 3>	<2, 0>	•••
	10	<2, 0>	<0, 1>	<1, 2>	<2, 3>	<0, 0>	<1, 1>	<2, 2>	<0, 3>	<1, 0>	<2, 1>	•••
	11	<2, 1>	<0, 2>	<1, 3>	<2, 0>	<0, 1>	<1, 2>	<2, 3>	<0, 0>	<1, 1>	<2, 2>	•••

Ma Fig. 5.

Additionally, the USPTO is characterizing Ma to "teach" at least some of the text of Independent Claim 1, but does not support its characterization with objectively verifiable evidence, therefore the USPTO has not met its burden to establish a *prima facie* case of unpatentability for Independent Claim 1. What a reference "teaches" is a question of fact.[50,51,52] Conclusory statements that a reference "teaches" something beyond its bare recitations/direct disclosure do not constitute ANY evidence of such "teachings" unless they are supported by objective evidence. *See In re McNeil-PPC,* 2008-1546 (Fed. Cir. July 31, 2009);[53]

[50] *See Rapoport v. Dement,* 254 F.3d 1053, 1060 (Fed. Cir. 2001) ("What a reference **teaches** is a question of fact,... Therefore, we review the Board's **characterization** of the **disclosure** in the FPR Publication for **substantial evidence**.") (emphasis added).

[51] *In re Bell***,** 991 F.2d 781 (Fed. Cir. 1993) (reversing the PTO and holding when the PTO presented no evidence to cure *prima facie* differences between patent claim and Examiner assertions regarding what the allegedly invalidating prior art "taught")

[52] Anticipation**,** as well as what a reference teaches**,** is a question of fact. *Teleflex, Inc. v. Ficosa N. Am. Corp.*, 299 F.3d 1313, 1323 (Fed. Cir. 2002).

[53] In *McNeil,* the Examiner had rejected claims reciting a tampon having "a generally cylindrical compressed, solid fibre core" and ribs "compressed less than the fiber core" in view of a Japanese patent application ("Sasaki"). McNeil appealed to the Board of Patent Appeals and Interferences, which "specifically found that 'Sasaki reasonably appears to depict a tampon having a generally cylindrical absorbent portion with a generally cylindrical compressed solid fiber core from which longitudinal ribs extend radially outward.' " *See id.,* 2008-1546, slip op. 1, 3 (Fed. Cir. July 31, 2009). In light of this and its finding that of each rib of Sasaki being "compressed less than the fiber core," the Board affirmed the rejections. Insofar that the Sasaki reference did not directly disclose/recite as alleged by the Board, and since the Board did not explain/supply evidence supporting its statement that "Sasaki reasonably appears to depict a tampon having a generally cylindrical absorbent portion with a generally cylindrical compressed solid fiber core from which longitudinal ribs extend radially outward," the Federal Circuit reversed the rejection for lack of "substantial evidentiary support," stating as follows:

> There is not substantial evidence, indeed, no evidence, that Sasaki discloses ribs "compressed less than the fiber core" or "a generally cylindrical compressed, solid fibre core." ... Just as the Sasaki figures do not indicate the relative compression of the different portions of the tampon, the Sasaki figures completely lack any indication of the relative coarseness of different portions. ... Lastly, turning to the issue of spacing of the ribs, Figure 8 shows a space between the bottommost ribs, and there is arguably some space shown between other ribs. However, because it is neither clear that Sasaki discloses a core nor which portions of Sasaki's tampon the Board considered to be the ribs and which the Board considered to be the core, we cannot say that substantial evidence supports the Board's determination that Sasaki discloses ribs separated from each other "at the proximal end by an amount greater than" than at "the distal end."

See id., 2008-1546, slip op. 1, 10-11 (Fed. Cir. July 31, 2009).

In re Lee, 277 F.3d 1338 (Fed. Cir. 2002);[54] *In re Kotzab*, 217 F.3d 1365, 1369 (Fed. Cir. 2000) ("Whether the Board relies on an express or an implicit showing, it must provide particular findings related thereto. … Broad conclusory statements standing alone are not "evidence.").[55] Even if the PTO personnel were to seek to support their characterizations with an expert witness affidavit, the law is that conclusory statements by an expert that a reference "teaches" something beyond its bare recitations/direct disclosure do not constitute ANY evidence of such "teachings" unless they are supported by objective documentary evidence.[56]

[54] In *Lee*, the USPTO argued that, to the "common sense of a person of ordinary skill in the art," it was obvious that one could combine a prior patent for an on-screen television menu with an on-screen picture-quality adjustment for a video game played on a television illustrated in the game's handbook. The Federal Circuit ruled that obviousness must be based on "objective evidence of record." Finding no specific published suggestion in the record, the Federal Circuit ruled the invention patentable. *See id.,* 277 F.3d 1338, 1342-44, 61 USPQ2d 1430, 1433-34 (Fed. Cir. 2002) (describing the BPAI's obligation to develop an evidentiary basis for its factual findings to allow for meaningful judicial review under the substantial evidence standard).

[55] In *Kotzab*, the Federal Circuit reversed the BPAI as follows:

> The Examiner cites Evans for teaching that "one *system* constructed and operated according to the invention may be used to control a number of valves." Evans application, p. 19, ll. 6-8 (emphasis added). In view of this disclosure only, the Examiner concluded that Evans teaches the use of one *sensor* to control a number of valves. This conclusion must necessarily rest on the unstated premise by the Examiner that "one system" is equal to "one sensor."
>
> But the Board's decision, adopting the Examiner's premise, lacks the necessary substantial evidence to support a rejection of Kotzab's claims. Specifically, there is not substantial evidence to show that "one system" is the same thing as "one sensor." The words "sensor" and "probe" are used throughout Evans to refer to the device that measures the mold temperature. … Evans clearly never uses the term "system" as a substitute for the simple temperature measuring device it calls "sensor." And, the Board made no reference to any evidence in the record that would equate "one system" with "one sensor."
>
> As mentioned previously, more than a mere scintilla of evidence is necessary to support the Board's implicit conclusion that "one system" is equal to "one sensor." Based on the entirety of Evans' disclosure, we cannot say that there is such relevant evidence as a reasonable mind might accept as adequate to support the conclusion that "one system" means "one sensor."

See id., 217 F.3d 1365, 1370-71 (Fed. Cir. 2000) (underline added).

[56] *See Motorola, Inc. v. Interdigital Tech. Corp.,* 121 F.3d 1461, 1473 (Fed. Cir. 1997) ("The district court's holding misapprehends the rigors of anticipation. For a prior art reference to anticipate a claim, the reference must disclose each and every element of the claim with sufficient clarity to prove its existence in the prior art... **Although this disclosure requirement presupposes**

Thus, when a party to a matter asserts that a reference "teaches" something beyond its bare recitations/direct disclosure, and that factual assertion is challenged by an opposite party, the law requires that the asserting party provide objective evidentiary support to "close the gap" between what the reference recites and the what the asserting party *alleges* the reference teaches; in the absence of such evidence, there should be no finding of fact in favor of the asserted teaching.[57,58,59,60] For each instance below in which the USPTO has made an unsupported characterization, Applicant accordingly requests that the USPTO either (1) withdraw the corresponding claim rejection or (2) provide an

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the knowledge of one skilled in the art of the claimed invention, that presumed knowledge does not grant a license to read into the prior art reference teachings that are not there. An expert's conclusory testimony, unsupported by the documentary evidence, cannot supplant the requirement of anticipatory disclosure in the prior art reference itself.") (emphasis added); *see also Genzyme Corp. v. Atrium Med. Corp.*, 315 F. Supp. 2d 552, 563 (D. Del. 2004) ("For a patent to be anticipated, every element of a patent claim must appear in a single reference. **Other references and opinion may be used to reveal what the reference would have meant to those skilled in the art at the time of the invention.... For a prior art reference to anticipate a claim, the reference must disclose each and every element of the claim with sufficient clarity to prove its existence in the prior art. Presumed knowledge of one skilled in the art does not allow an expert to read into the reference elements that are not there.**") (emphasis added)

[57] *See Rapoport v. Dement* 254 f. 3rd 1053, 1060 (Fed. Cir. 2001) . In *Rapoport,* the Federal Circuit affirmed the Board's holding that a publication did not anticipate a claim, reasoning as follows (emphasis added):

> Having construed the disputed term in the interference count and affirmed the Board's interpretation, we can properly address the merits of Rapoport's anticipation argument. The Board found that the disclosure of the FPR Publication was limited to treatment of anxiety in patients suffering from sleep apnea with buspirone, and did not address treatment of the underlying sleep apnea disorder. What a reference **teaches** is a question of fact,.... There is no disclosure in the FPR Publication of tests in which buspirone is administered to patients suffering from sleep apnea with the intent to cure the underlying condition.... The Board also correctly found that the FPR Publication does not show administering buspirone in any specific amounts to patients suffering from sleep apnea,... We note that there is no mention in the FRP Publication of administering buspirone to a patient at bedtime.... Therefore, for all the reasons stated above, we find that the Board's conclusion that the FPR Publication does not disclose administration of buspirone to patients suffering from sleep apnea to treat sleep apnea is supported by substantial evidence.

[58] *See In re Bell*, 991 F.2d 781 (Fed. Cir. 1993) (reversing the PTO's holding that a gene was "prima facie obvious over its corresponding protein" in the cited reference, absent any evidence of a one-to-one correspondence).

[59] *See In re McNeil-PPC*, 2008-1546 (Fed. Cir. July 31, 2009).

[60] *See In re Kotzab*, 217 F.3d 1365, 1369 (Fed. Cir. 2000).

affidavit setting forth objectively verifiable evidence sufficient to "close the gap" between the characterization and what the reference actually recites.

As can be seen from the foregoing, for example, the USPTO-identified portions of Ma do *not recite* the text of at least Clause [a] of Independent Claim 1: "[a] publishing a schedule of content transmission, the schedule being defined in response to an order in which the at least one content is spatially resident upon at least one hardware spatial data storage system, the schedule identifying the content by one or more times." Instead, Ma recites "A given data stream is separated into a plurality of portions, and the portions are stored in a multi-disk storage system with Y disks each having X zones such that the ith portion of the given stream is stored in zone (i mod X) of disk (i mod Y)." (See Ma Abstract.) Consequently, on its face, Ma does not show the text of at least Clause [a] of Independent Claim 1.

Also as noted above at page 42 *et seq.*, the USPTO has asserted that the Ma reference teaches the schedule identifying the content by one or more times. Applicant respectfully traverses this assertion and notes that the Ma reference actually indicates "The retrieval schedulers are also configured such that the retrieval requests of a given retrieval scheduler access the same disk during a given scheduling interval. The data stream placement technique in conjunction with the retrieval schedulers provide sequential-like parallel retrieval suitable for supporting real-time multimedia data distribution for large numbers of clients." (See Ma Abstract.) To Applicant, it appears that the USPTO has tried to close a significant gap between this actual recitation of the Ma reference and the "[a] publishing a schedule of content transmission, the schedule being defined in response to an order in which the at least one content is spatially resident upon at least one hardware spatial data storage system, the schedule identifying the content by one or more times" (in Clause [a] of Applicant's Claim 1) without providing any evidence, by merely making this unsupported assertion.

Applicant has shown by direct quotations that Independent Claim 1 and the Ma reference are very different on their faces. *See supra* at p. 38 (quotation of Claim 1); and at p. 67 *et seq.* (quotation of Ma). Insofar that Applicant has shown that *"at first sight; on the first appearance; on the face of it; so far as can be judged from the first disclosure"* the USPTO-cited art is very different from Claim 1, and Applicant has noted that the USPTO has not cited to any objectively verifiable evidence/argument based on same sufficient to remedy such *prima facie* differences, the USPTO-cited technical material does not establish a *prima facie* case of the unpatentability of Claim 1 either under the MPEP or under controlling legal standards. *See supra* at pp. 24–37.

Accordingly, insofar as that Ma and/or Jaeger does not recite the text of at least Clause [a] of Applicant's Independent Claim 1, and insofar as that the USPTO has provided no objectively verifiable evidence, or argument based on objectively verifiable evidence, as to how Ma and/or Jaeger could be modified/combined to teach at least Clause [a] of Independent Claim 1, Applicant respectfully points out that under the MPEP guidelines as set forth above, the USPTO-cited technical material does not a establish a *prima facie* case of the unpatentability of Independent Claim 1 for at least these reasons. Thus, Applicant respectfully asks the USPTO to hold Independent Claim 1 allowable and to issue a Notice of Allowability of same.

With respect to the USPTO assertions regarding the teachings of Ma, Applicant demonstrated above that the express recitations of Ma are not as the USPTO alleges, and that the USPTO has provided no evidence—let alone the preponderance of the evidence required—to support the USPTO assertions as to the factual conclusion as to what Ma "teaches." Accordingly, Applicant respectfully points out that in view of the foregoing, the USPTO has presented no evidence that Ma teach as asserted by the USPTO. In addition, Applicant respectfully points out that even if the USPTO's assertions regarding the teachings of Ma were supported, such would be of no moment in that the USPTO

has yet to connect the alleged teaching of Ma to the actual express language of Applicant's Independent Claim 1. Under the MPEP guidelines as set forth above, the cited art of record fails to establish a *prima facie* case of unpatentability for at least these reasons. Accordingly, for at least the foregoing reasons, Applicant respectfully requests that the USPTO hold Independent Claim 1 allowable and issue a Notice of Allowability of same.

(6) The USPTO Characterization/Assertion Appears to be Based on Inadvertent Impermissible Hindsight, Personal Knowledge, or Official Notice; Applicant Requests Issuance of Notice of Allowability

Given that Applicant has shown, above, what Ma actually recite, the question thus naturally arises as to how the USPTO saw Ma as "teaching" something related to Clause [a] of Independent Claim 1. Applicant respectfully points out that the Applicant's Application is the only objectively verifiable USPTO-cited document of record that shows or suggests what the USPTO purports the references to teach. From this and the express recitations of Ma as set forth, it follows that the USPTO is interpreting Ma through the lens of Applicant's application, which is impermissible hindsight use. Thus, at present, the USPTO's assertions regarding Ma are untenable. Under the MPEP guidelines as set forth above, the cited art of record fails to establish a *prima facie* case of unpatentability for at least these reasons. Accordingly, for at least the foregoing reasons, Applicant respectfully requests that the USPTO hold Independent Claim 1 allowable and issue a Notice of Allowability of same.

As the USPTO has provided no objectively verifiable evidence, nor argument based on objectively verifiable evidence, in support of the USPTO assertions regarding what the technical material cited by the USPTO "teaches," Applicant infers that the USPTO is relying on "personal knowledge" and/or is

taking "official notice" of one or more factors to reach the factual conclusion of what the cited technical material "teaches." In view of the foregoing, if the USPTO desires to maintain the rejection, in the next communication, Applicant respectfully requests that the USPTO provide an affidavit or declaration setting forth objectively verifiable evidence in support of the USPTO's currently unsupported assertions regarding what the cited technical material "teaches" and/or should be interpreted to "teach." *See, e.g.*, MPEP § 2144.03(C), *If Applicant Challenges a Factual Assertion as Not Properly Officially Noticed or Not Properly Based Upon Common Knowledge, the Examiner Must Support the Finding with Adequate Evidence*, and 37 C.F.R. 1.104(d)(2).

(7) The USPTO-Suggested Modifications to Meet the Recitations of Independent Claim 1 Change the Principle of Operation of Components Being Modified; No Teaching to Modify/Combine Components as a Matter of Law.

With respect to this point, Applicant respectfully directs the USPTO to *MPEP* § 2143.01, Suggestion or Motivation to Modify the References, which states as follows (emphasis added):

> THE PROPOSED MODIFICATION CANNOT CHANGE THE PRINCIPLE OF OPERATION OF A REFERENCE
>
> If the proposed modification or combination of the prior art would change the principle of operation of the prior art invention being modified, then the teachings of the references are not sufficient to render the claims *prima facie* obvious. In re Ratti, 270 F.2d 810, 123 USPQ 349 (CCPA 1959) (Claims were directed to an oil seal comprising a bore engaging portion with outwardly biased resilient spring fingers inserted in a resilient sealing member. The primary reference relied upon in a rejection based on a combination of references disclosed an oil seal wherein the bore engaging portion was reinforced by a cylindrical sheet metal casing. Patentee taught the device required rigidity for operation, whereas the claimed invention

required resiliency. The court reversed the rejection holding the "suggested combination of references would require a substantial reconstruction and redesign of the elements shown in [the primary reference] as well as a change in the basic principle under which the [primary reference] construction was designed to operate." 270 F.2d at 813, 123 USPQ at 352.).

As noted above, the USPTO has stated as follows:

6. **As per claims 1 and 26**, but more specifically claim 1, Miller discloses a method comprising:

publishing a schedule of content transmission, the schedule identifying the content by one or more times (col. 3, lines 1-2; col. 13, lines 4-9, Fig. 3, element 114);

transmitting the at least one content to a temporal data storage system in accord with the published schedule (col. 3, lines 3-8; col. 13, lines 10-13; Fig. 3, element 116; col. 5, lines 39-48; Fig. 1, elements 16, 18, 20; Fig. 2, element 46). *It should be noted that the "tape drives" within the "replicated servers" are analogous to a "temporal data storage system."*

Miller does not disclose reading at least one content from at least one hardware spatial data storage system in a fashion independent of the schedule of content transmission.

Jaeger discloses reading at least one content from at least one hardware spatial data storage system in a fashion independent of the schedule of content transmission (col. 5, lines 49-52; col. 2, lines 41-45; Fig. 1, element 11). *It should be noted that the "data signals/tracks" are analogous to the "at least one content" and that the "disk drive" is analogous to a "hardware spatial data storage system."*

Miller and Jaeger are analogous art because they are from the same field of endeavor, that being data transmission.

At the time of the invention it would have been obvious to a person of ordinary skill in the art to implement Jaeger's reordering of data signals within Miller's content source's hard disk drives because all the claimed elements were known in the prior art and one skilled in the art could have combined the elements as claimed by known methods with no change in their respective functions, and the combination would have yielded the predictable results of maximizing the number of data signals that can be transmitted from a disk drive by minimizing seek time of the disk drive head.

The combination of Miller/Jaeger does not disclose the schedule being defined in response to an order in which the at least one content is spatially resident upon at least one hardware spatial data storage system.

Ma discloses the schedule being defined in response to an order in which the at least one content is spatially resident upon at least one hardware spatial data storage system (col. 9, lines 10-22; col. 10, lines 43-60; Figs. 4 and 5). *It should be noted that "disk-based storage system 14" is equivalent to the "hardware spatial data storage system". It should also be noted that the schedules in Fig. 5 are defined in response to*

the location of data in the disk-based storage system. The location of data in the disk-based storage system dictates the order of data in the disk-based storage system. Therefore, it follows that the schedules in Fig. 5 are also defined in response to the order of the data in the disk-based storage system.

The combination of Miller/Jaeger and Ma are analogous art because they are from the same field of endeavor, that being data transmission.

At the time of the invention it would have been obvious to a person of ordinary skill in the art to apply Ma's scheduling technique to Miller/Jaeger's distribution schedule. The motivation for doing so would have been to provide sequential-like parallel retrieval suitable for supporting real-time multimedia data distribution for large numbers of clients.

Office Action, p. 3-5 (5 October 2009) (emphasis modified).

Applicant respectfully asserts that one reason for Miller's lack of disclosure of "the schedule identifying the content by one or more times" may be gleaned from principles of operation indicated in this recitation:

> In accordance with the invention, a network resource scheduler (hereinafter "scheduler") receives requests from one or more content sources requesting data transmission to one or more replicated servers. The scheduler is coupled to a computer network such as a Wide Area Network (WAN), a Local Area Network (LAN), the Internet, a wireless network (e.g., a cellular data network), or a satellite network. In accordance with the invention, the network is multicast enabled, i.e., multicast addresses are used and are routed through the network by the network infrastructure. The content sources transmit data (e.g., one or more computer files) to the replicated servers pursuant to one or more distribution schedules generated by the scheduler. The scheduler creates the distribution schedules based on the requests from the content sources, which requests typically include the size or amount of the data to be transmitted, the desired completion time for the data transmission, and a priority level associated therewith. In one embodiment, the distribution schedules are determined based on a predetermined start time which is a time at which data transmission from each of the requesting content sources will commence

Miller at col. 1, line 57-col. 2, line 10 (emphasis added).

Applicant respectfully points out that were one to incorporate the scheduler as recited by the instant claims[61] into the structure of Miller, Miller would no longer have "distribution schedules based on the requests from the content sources, which requests typically include the size or amount of the data to be transmitted, the desired completion time for the data transmission, and a priority level associated therewith." (Emphasis added.) Thus, the USPTO-suggested modifications/combinations would change the principle of operation of Miller for at least this reason.

As discussed above, one reason why such modified Miller technologies would be rendered unsatisfactory is that, at present, the USPTO has not yet provided any teaching of how to incorporate the structure of Jaeger and/or Ma with the Miller technologies to provide "[a] publishing a schedule of content transmission, the schedule being defined in response to an order in which the at least one content is spatially resident upon at least one hardware spatial data storage system, the schedule identifying the content by one or more times," as recited in Independent Claim 1. Hence, in addition to the USPTO-suggested modification/combination, there would need to be some type of reconstruction and/or redesign – appropriate to the capabilities of the structure and method of Miller – to provide for the structure of Jaeger.

As has been shown above, the technologies of Miller modified/combined with the structure of Jaeger and/or Ma as suggested by the USPTO would require "substantial reconstruction and redesign of the elements shown in [... Miller] as well as a change in the basic principle under which the [... Miller] construction was designed to operate" in order to render the USPTO-suggested combination capable of performing even a subset of the intended purposes of the technologies of

[61] For example, Claim 1 recites: A method comprising: [a] publishing a schedule of content transmission, the schedule being defined in response to an order in which the at least one content is spatially resident upon at least one hardware spatial data storage system, the schedule identifying the content by one or more times; [b] reading at least one content from the at least one hardware spatial data storage system in a fashion independent of the schedule of content transmission; and [c] transmitting the at least one content to a temporal data storage system in accord with the published schedule

Miller.[62] As has also been shown, even if the USPTO-suggested combination were to be somehow hypothetically modified such that the USPTO suggested modification/combination became somewhat workable, such a hypothetically modified version of the USPTO-suggested combination would itself require "substantial reconstruction and redesign of the [hypothetically modified] elements shown in [... Miller] as well as a change in the basic principle under which the [hypothetically modified] [... Miller] construction was designed to operate" in order to perform the intended communications. Accordingly, insofar as that the USPTO-suggested modification itself would likely require at least one additional and as-yet-hypothetical modifications as explained above, under the MPEP standards set forth in block quote above, the USPTO's suggested modification/combination "would change the principle of operation" of Miller's technologies.

Insofar as that the USPTO-suggested modification/combination would itself require *substantial* hypothetical reconstruction and/or redesign to render the USPTO-suggested modification/combination capable of performing the intended purposes, under the MPEP guidelines as set forth above, the theory of operation of the technologies of Miller will have been changed. Consequently, under the MPEP standards as set forth above there can be no teaching to modify/combine such references to meet the recitations of Independent Claim 1 as a matter of law. Accordingly, in light of the MPEP standards for patentability, Applicant respectfully requests that the USPTO hold Independent Claim 1 patentable and issue a Notice of Allowance of Applicant's Independent Claim 1 for at least the foregoing reasons.

[62] This statement reflects Applicant's current understanding. If Examiner can specify how such modifications/combinations can be implemented without substantially undermining any of the intended purposes of Jaeger and/or Ma: however, Applicant respectfully requests that such specification be included with the next Office Action.

(8) Modifications to Meet the Recitations of Independent Claim 1 Render Components Being Modified Unsatisfactory for their Intended Purposes; No Teaching to Modify/Combine Components as a Matter of Law.

Furthermore, "if proposed modification would render the prior art invention being modified unsatisfactory for its intended purpose, then there is no suggestion or motivation to make the proposed modification." With respect to this point, Applicant respectfully directs the USPTO to *MPEP* § 2143.01, Suggestion or Motivation to Modify the References, which states as follows (emphasis added):

> THE PROPOSED MODIFICATION CANNOT RENDER THE PRIOR ART UNSATISFACTORY FOR ITS INTENDED PURPOSE
>
> If proposed modification would render the prior art invention being modified unsatisfactory for its intended purpose, then there is no suggestion or motivation to make the proposed modification. *In re Gordon*, 733 F.2d 900, 221 USPQ 1125 (Fed. Cir. 1984) (Claimed device was a blood filter assembly for use during medical procedures wherein both the inlet and outlet for the blood were located at the bottom end of the filter assembly, and wherein a gas vent was present at the top of the filter assembly. The prior art reference taught a liquid strainer for removing dirt and water from gasoline and other light oils wherein the inlet and outlet were at the top of the device, and wherein a pet-cock (stopcock) was located at the bottom of the device for periodically removing the collected dirt and water. The reference further taught that the separation is assisted by gravity. The Board concluded the claims were *prima facie* obvious, reasoning that it would have been obvious to turn the reference device upside down. The court reversed, finding that if the prior art device was turned upside down it would be inoperable for its intended purpose because the gasoline to be filtered would be trapped at the top, the water and heavier oils sought to be separated would flow out of the outlet instead of the purified gasoline, and the screen would become clogged.).

As noted above, the USPTO has stated as follows:

> At the time of the invention it would have been obvious to a person of ordinary skill in the art to implement Jaeger's reordering of data signals within Miller's content source's hard disk drives because all the claimed

elements were known in the prior art and one skilled in the art could have combine the elements as claimed by known methods with no change in their respective functions, and their combination would have yielded the predictable results of maximizing the number of data signals that can be transmitted from a disk drive by minimizing seek time of the disk drive head.

The combination of Miller/Jaeger does not disclose the schedule being defined in response to an order in which the at least one content is spatially resident upon at least one hardware spatial data storage system.

Office Action, p. 4 (5 October 2009).

At the time of the invention it would have been obvious to a person of ordinary skill in the art to apply Ma's scheduling technique to Miller/Jaeger's distribution schedule. The motivation for doing so would have done to provide sequential-like parallel retrieval suitable for supporting a real-time multimedia data distribution for large numbers of clients.

Office Action, p. 4 (5 October 2009).

Applicant again points out that the USPTO has provided no evidence to modify/combine the cited technical materials to reach the recitations of Independent Claim 1. Even assuming, ***arguendo***, that the USPTO had produced an as-yet-unknown objective teaching of how to modify/combine the USPTO-suggested modification/combination of the structure of Jaeger and/or Ma with the technology of Miller to create "publishing a schedule of content transmission, the schedule being defined in response to an order in which the at least one content is spatially resident upon at least one hardware spatial data storage system, the schedule identifying the content by one or more times" (as set forth in Independent Claim 1) such a database would apparently render the technologies of Miller unsatisfactory for one or more of their intended purposes.

Miller recites:

"In one aspect, the invention relates to a system and a related method for coordinating data transmission over a computer network. With this system and related method, the availability of network bandwidth for data transmission by one or more content sources on the network is obtained. Each content source has a priority. This function (and generally all of the functionality of this system and the steps of the related method) is performed by a network resource scheduler. Prior to the obtaining step, a person such as an operator or network manager typically has used the

network resource scheduler to set the availability. The operator, network manager, or other person typically also sets at the network resource scheduler various other parameters and information (e.g., content source priority level) that the network resource scheduler obtains and then uses to create the distribution schedules. After the obtaining step, transmission request information is received at the network resource scheduler from each of requesting ones of the content sources. This transmission request information includes (i) a requested delivery time for data transmission and (ii) the amount of the data to be transmitted. The network resource scheduler then determines, based on at least the priority of the requesting content sources and at least some of the transmission request information from each requesting content source, network bandwidth available to each requesting content source such that data transmission by each requesting content source is completable by the requested delivery time. The network resource scheduler then sends to each requesting content source (i) the time to begin data transmission and (2) the rate at which to transmit the data. Each requesting content source then preferably performs a multicast transmission in accordance with the scheme described in the later-filed incorporated-by-reference copending patent application. In this aspect of the invention, at least one of the content sources can be co-resident with the network resource scheduler."

Miller at col. 3, lines 26-62.

It is unclear, at best, how these purposes can be served by a method or apparatus publishing a sechedule of content transmission, the schedule identifying the content by one or more times in conjunction with recited features of Independent Claim 1. Thus, for at least this reason, the suggested modifications/combinations would render the technologies of Miller unsatisfactory for their intended purposes. There can thus be no teaching to modify/combine such references to meet the recitations of Independent Claim 1 as a matter of law. Accordingly, and in light of the MPEP standards for patentability as set forth above, Applicant respectfully requests that the USPTO hold Applicant's Independent Claim 1 patentable and issue a Notice of Allowance of Independent Claim 1 for at least the reasons set forth herein.

2. Dependent Claims 2-25 Patentable for at Least Reasons of Dependency from Independent Claim 1

Claims 2-25[63] depend either directly or indirectly from Independent Claim 1. "A claim in dependent form shall be construed to incorporate by reference all the limitations of the claim to which it refers." *See* 35 U.S.C. § 112 paragraph 4. Consequently, Dependent Claims 2-25 are patentable for at least the reasons why Independent Claim 1 is patentable. Accordingly, Applicant respectfully requests that the USPTO hold Dependent Claims 2-25 patentable for at least the foregoing reasons, and issue a Notice of Allowability on same.

3. Dependent Claim 2 is Independently Patentable

Independent Claim 1 recites as follows:

1. A method comprising:

[a] publishing a schedule of content transmission, the schedule being defined in response to an order in which the at least one content is spatially resident upon at least one hardware spatial data storage system, the schedule identifying the content by one or more times;

[b] reading at least one content from the at least one hardware spatial data storage system in a fashion independent of the schedule of content transmission; and

[c] transmitting the at least one content to a temporal data storage system in accord with the published schedule.

Dependent Claim 2 recites as follows:

2. The method of Claim 1, [d] wherein said publishing a schedule of content transmission, the schedule being defined in response to an order in

[63] In relation to these dependent claims, the USPTO has provided no objectively verifiable evidence, nor argument based on objectively verifiable evidence, in support of its assertions regarding what the USPTO-cited material "discloses." Insofar as this alleged disclosure is not literally recited in such material, Applicant respectfully asserts that the Examiner must have relied on "personal knowledge" or taken improper "official notice" of one or more factors to reach each of these assertions. Applicant accordingly requests an appropriate affidavit or declaration in support of any of these rejections that are to be maintained, including any considerations purported to reflect what is "well known in the art." *See, e.g.*, 37 C.F.R. 1.104(d)(2).

which the at least one content is spatially resident upon at least one hardware spatial data storage system, the schedule identifying the content by one or more times further comprises:

[e] printing the schedule of content transmission on a medium; and distributing the medium to one or more sites associated with one or more associated data switch controllers.[64]

As shown following, (1) the USPTO-cited material fails to recite several express recitations of these claims; (2) the USPTO is asserting that each cited reference "teaches" at least some of the text of Dependent Claim 2, but has not provided any objectively verifiable evidence supporting these assertions; and (3) the USPTO has failed to adduce objective evidence of how to modify/combine the cited art to match the recitations of Dependent Claim 2. Moreover, Applicant maintains that such modifications/combinations would change the principle of operation of the cited art and/or render its components unfit for their intended purpose.

Concerning this subject matter, the USPTO has stated the following:

As to Applicant's arguments with respect to Claim 1:

[64] The lettering of the clauses herein is merely for sake of clarity of argument and should not be taken to imply any particular ordering of the clauses.

6 **As per claims 1 and 26**, but more specifically claim 1, Miller discloses a method comprising:

publishing a schedule of content transmission, the schedule identifying the content by one or more times (col. 3, lines 1-2; col. 13, lines 4-9; Fig. 3, element 114);

transmitting the at least one content to a temporal data storage system in accord with the published schedule (col. 3, lines 3-8; col. 13, lines 10-13; Fig. 3, element 116; col. 5, lines 30-46; Fig. 1, elements 16, 18, 20, Fig. 2, element 46). *It should be noted that the "tape drives" within the "replicated servers" are analogous to a "temporal data storage system."*

Miller does not disclose reading at least one content from at least one hardware spatial data storage system in a fashion independent of the schedule of content transmission.

Jaeger discloses reading at least one content from at least one hardware spatial data storage system in a fashion independent of the schedule of content transmission (col. 5, lines 49-52; col. 2, lines 41-45; Fig. 1, element 11). *It should be noted that the "data signals/tracks" are analogous to the "at least one content" and that the "disk drive" is analogous to a "hardware spatial data storage system."*

Miller and Jaeger are analogous art because they are from the same field of endeavor, that being data transmission.

At the time of the invention it would have been obvious to a person of ordinary skill in the art to implement Jaeger's reordering of data signals within Miller's content source's hard disk drives because all the claimed elements were known in the prior art and one skilled in the art could have combined the elements as claimed by known methods with no change in their respective functions, and the combination would have yielded the predictable results of maximizing the number of data signals that can be transmitted from a disk drive by minimizing seek time of the disk drive head.

The combination of Miller/Jaeger does not disclose the schedule being defined in response to an order in which the at least one content is spatially resident upon at least one hardware spatial data storage system.

Ma discloses the schedule being defined in response to an order in which the at least one content is spatially resident upon at least one hardware spatial data storage system (col. 9, lines 10-22; col. 10, lines 43-60; Figs. 4 and 5). *It should be noted that "disk-based storage system 14" is equivalent to the "hardware spatial data storage system". It should also be noted that the schedules in Fig. 5 are defined in response to the location of data in the disk-based storage system. The location of data in the disk-based storage system dictates the order of data in the disk-based storage system. Therefore, it follows that the schedules in Fig. 5 are also defined in response to the order of the data in the disk-based storage system.*

The combination of Miller/Jaeger and Ma are analogous art because they are from the same field of endeavor, that being data transmission.

At the time of the invention it would have been obvious to a person of ordinary skill in the art to apply Ma's scheduling technique to Miller/Jaeger's distribution schedule. The motivation for doing so would have been to provide sequential-like parallel retrieval suitable for supporting real-time multimedia data distribution for large numbers of clients.

Office Action at p. 3-5 (5 October 2009).

As to Applicant's arguments with respect to Claim 2:

7. As per claims 2 and 27, the combination of Miller/Jaeger/Ma discloses said publishing a schedule of content transmission, the schedule being defined in response to an order in which the at least one content is spatially resident upon at least one hardware spatial data storage system, the schedule identifying the content by one or more times further comprises:

printing the schedule of content transmission on a medium (Miller, col. 3, lines 1-2 and 63-67; col. 13, lines 4-9; Fig. 3, element 114); *It should be noted that act of "transmitting" the "distribution schedule" across the "communication links" anticipates the act of "printing the schedule of content transmission on a medium" because the distribution schedule is reproduced ("printed") on the communication link ("medium").*

and distributing the medium to one or more sites associated with one or more associated data switch controllers (Miller, col. 3, lines 1-2; col. 13, lines 4-9; Fig. 3, element 114; col. 5, lines 39-43; Fig. 1, elements 16, 18, 20; Fig. 2, element 34). *It should be noted that the "replicated servers" are equivalent to the "one or more sites" and that the "I/O controllers" are equivalent to the "data switch controllers."*

Office Action at p. 5-6 (5 October 2009). Applicant disagrees and traverses the rejection on several grounds.[65]

First, the USPTO-cited material fails to recite several express terms of Dependent Claim 2 and therefore the USPTO has not met its burden to establish a *prima facie* case of unpatentability for Dependent Claim 2. It appears to Applicant that the USPTO has mapped "[a] publishing a schedule of content transmission, the schedule being defined in response to an order in which the at least one content is spatially resident upon at least one hardware spatial data storage system, the schedule identifying the content by one or more times" onto a configuration by which "*The distribution schedules that can be accommodated are then transmitted*

[65] Applicant respectfully asserts that the USPTO has apparently not examined the recitations of Applicant's claims, and has not addressed the express language of both Applicant's claims and the cited technical material. Accordingly, Applicant respectfully maintains that the USPTO has not established a *prima facie* case of the unpatentability of any pending claim for at least this reason. Notwithstanding the foregoing, Applicant demonstrates herein that even if the USPTO had followed the MPEP examination guidelines, no *prima facie* case of unpatentability would be extant.

to certain of the requesting content sources." (Emphasis modified.) Applicant notes that the USPTO has not explained how it reaches such mappings under the broadest reasonable interpretation framework as is the USPTO's burden (e.g., such as by examples drawn from Applicant's claims or detailed description),[66] and furthermore, Applicant points out that this mapping does not address at least the "a user-formed unique identifier recognizable by a pattern recognition method."

It also appears to Applicant that the USPTO has mapped "[e] printing the schedule of content transmission on a medium; and distributing the medium to one or more sites associated with one or more associated data switch controllers" of Dependent Claim 2 onto the same configuration. Applicant notes that the USPTO has not explained how it reaches this mapping under the broadest reasonable interpretation framework as is the USPTO's burden, and furthermore, Applicant points out that this mapping does not address at least the "printing the schedule of content transmission."

In view of the foregoing, Applicant points out that although Dependent Claim 2 has been quoted in the present rejection, several claim terms have not been addressed in its analysis. Because the USPTO-cited technical material fails to recite at least the foregoing bolded recitations of Dependent Claim 2,[67] under the MPEP guidelines as set forth above, such material does not establish a *prima facie* case of the unpatentability of Dependent Claim 2. For these reasons, Applicant respectfully asks the USPTO to hold Dependent Claim 2 allowable and to issue a Notice of Allowability of same.

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[66] Irrespective of a desire to be cooperative, the ability of any patent practitioner to help the Examiner fulfill this burden on the record is tightly curtailed by pre- and post-issuance legal standards and by various ethical duties in tension. *See, e.g.,* 37 C.F.R. § 10.83 ("A practitioner should represent a client zealously within the bounds of the law."); 37 C.F.R. § 10.84 ("[A] practitioner shall not intentionally ... [p]rejudice or damage a client during the course of a professional relationship, except as required under this [ethics] part."); and 37 C.F.R. § 10.76 ("A practitioner should represent a client competently."). For these and other reasons, this document notes instances in which the USPTO did not follow the prescribed rules rather than seeking to interpret claims and/or to adduce evidence on the USPTO's behalf.

[67] Although Dependent Claim 2 has been quoted in the present rejection, several claim terms have not been addressed in its analysis, as shown below.

Until the USPTO has supported its statement under the broadest reasonable interpretation framework, moreover, Applicant here returns to the express language of the claim. Applicant has reviewed the material identified by the USPTO, and so far as Applicant can discern, the Miller reference does not recite "wherein the unique machine-distinguishable identifier includes a user-formed unique identifier recognizable by a pattern recognition method" and "further including a detector module operable to generate a signal indicative of a unique machine-distinguishable identifier associated with the user-formed unique identifier and to distribute a representation of the unique user-understandable identifier to the data receptor that is keyed by the unique machine-distinguishable identifier keyed to a data receptor." Rather, the textual portions of Miller cited by the USPTO actually recite as follows:

> **3**
>
> The distribution schedules that can be accommodated are then transmitted to certain of the requesting content sources.

Miller at col. 3, lines 1-2.

> It is noted that in general the terms "transfer," "transmit," "transmission," "distribute," "distribution," "deliver," "delivery," etc. are used herein interchangeably to identify the same thing, namely, the transfer of data across a computer network or communications link.

Miller at col. 3, lines 63-67.

> **114**. In this step, the scheduler **10** distributes transmission instructions to the content sources **12, 14**. These instructions include the time to start transmitting the content data to the replicated servers **16, 18, 20**, the transfer rate, typically in bits/second, the overage factor, and the multicast address assigned.

Miller at col. 13, lines 4-9.

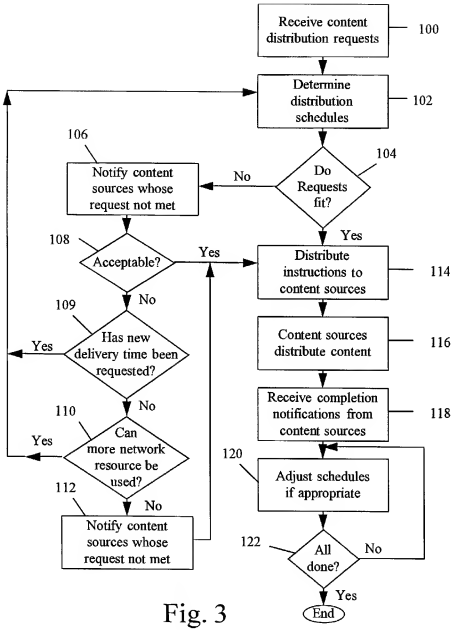

Fig. 3

Miller Fig. 3.

of a variety of operating systems. Referring to FIG. **2**, the scheduler **10**, content sources **12**, **14**, and replicated servers **16**, **18**, **20** each typically include a central processor **30**, a main memory **32** for storing programs and/or data, an input/output controller **34**, a network interface **36**, one or more input devices **38** such as a keyboard or mouse, a display device **40**, a fixed or hard disk drive unit **42**, a floppy disk drive unit **44**, a tape drive unit **46**, and a data bus **48** coupling these components to allow communication therebetween. The content sources **12**, **14**, and replicated servers

Miller at col. 5, lines 39-48.

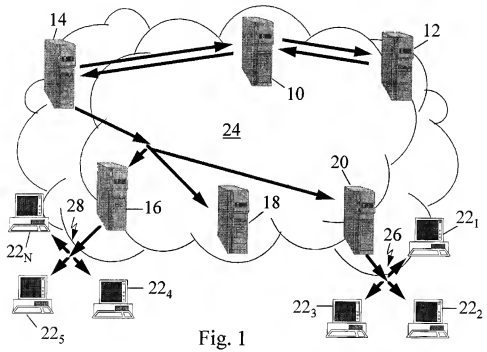

Fig. 1

Miller Fig.1.

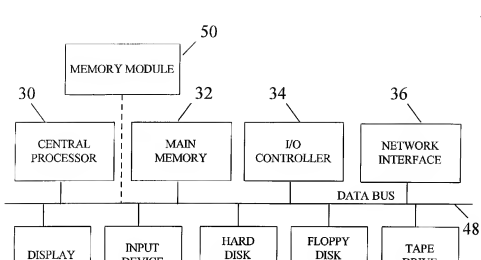

Fig. 2

Miller Fig. 2.

The USPTO is characterizing Miller to "teach" the text of Dependent Claim 2, but does not support its characterization with objectively verifiable evidence, therefore the USPTO has not met its burden to establish a *prima facie* case of unpatentability for Dependent Claim 2. What a reference "teaches" is a question of fact.[68,69,70] Conclusory statements that a reference "teaches" something beyond its bare recitations/direct disclosure do not constitute ANY evidence of such "teachings" unless they are supported by objective evidence. *See In re McNeil-PPC,* 2008-1546 (Fed. Cir. July 31, 2009);[71] *In re Lee,* 277 F.3d

[68] *See Rapoport v. Dement,* 254 F.3d 1053, 1060 (Fed. Cir. 2001) ("What a reference **teaches** is a question of fact... Therefore, we review the Board's **characterization** of the **disclosure** in the FPR Publication for **substantial evidence**.") (emphasis added).

[69] *In re Bell,* 991 F.2d 781 (Fed. Cir. 1993) (reversing the PTO and holding when the PTO presented no evidence to cure *prima facie* differences between patent claim and Examiner assertions regarding what the allegedly invalidating prior art "taught")

[70] Anticipation, as well as what a reference teaches, is a question of fact. *Teleflex, Inc. v. Ficosa N. Am. Corp.*, 299 F.3d 1313, 1323 (Fed. Cir. 2002).

[71] In *McNeil,* the Examiner had rejected claims reciting a tampon having "a generally cylindrical compressed, solid fibre core" and ribs "compressed less than the fiber core" in view of a Japanese

1338 (Fed. Cir. 2002);[72] *In re Kotzab*, 217 F.3d 1365, 1369 (Fed. Cir. 2000) ("Whether the Board relies on an express or an implicit showing, it must provide particular findings related thereto. ... Broad conclusory statements standing alone are not "evidence.").[73] Even if the PTO personnel were to seek to support

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patent application ("Sasaki"). McNeil appealed to the Board of Patent Appeals and Interferences, which "specifically found that 'Sasaki reasonably appears to depict a tampon having a generally cylindrical absorbent portion with a generally cylindrical compressed solid fiber core from which longitudinal ribs extend radially outward.' " *See id.,* 2008-1546, slip op. 1, 3 (Fed. Cir. July 31, 2009). In light of this and its finding that of each rib of Sasaki being "compressed less than the fiber core," the Board affirmed the rejections. Insofar that the Sasaki reference did not directly disclose/recite as alleged by the Board, and since the Board did not supply evidence supporting its statement that "Sasaki reasonably appears to depict a tampon having a generally cylindrical absorbent portion with a generally cylindrical compressed solid fiber core from which longitudinal ribs extend radially outward," the Federal Circuit reversed the rejection for lack of "substantial evidentiary support," stating as follows:

> There is not substantial evidence, indeed, no evidence, that Sasaki discloses ribs "compressed less than the fiber core" or "a generally cylindrical compressed, solid fibre core." ... Just as the Sasaki figures do not indicate the relative compression of the different portions of the tampon, the Sasaki figures completely lack any indication of the relative coarseness of different portions. ... Lastly, turning to the issue of spacing of the ribs, Figure 8 shows a space between the bottommost ribs, and there is arguably some space shown between other ribs. However, because it is neither clear that Sasaki discloses a core nor which portions of Sasaki's tampon the Board considered to be the ribs and which the Board considered to be the core, we cannot say that substantial evidence supports the Board's determination that Sasaki discloses ribs separated from each other "at the proximal end by an amount greater than" than at "the distal end."

See id., 2008-1546, slip op. 1, 10-11 (Fed. Cir. July 31, 2009).

[72] In *Lee,* the USPTO argued that, to the "common sense of a person of ordinary skill in the art," it was obvious that one could combine a prior patent for an on-screen television menu with an on-screen picture-quality adjustment for a video game played on a television illustrated in the game's handbook. The Federal Circuit ruled that obviousness must be based on "objective evidence of record." Finding no specific published suggestion in the record, the Federal Circuit ruled the invention patentable. *See id.,* 277 F.3d 1338, 1342-44, 61 USPQ2d 1430, 1433-34 (Fed. Cir. 2002) (describing the BPAI's obligation to develop an evidentiary basis for its factual findings to allow for meaningful judicial review under the substantial evidence standard).

[73] In *Kotzab*, the Federal Circuit reversed the BPAI as follows:

> The Examiner cites Evans for teaching that "one *system* constructed and operated according to the invention may be used to control a number of valves." Evans application, p. 19, ll. 6-8 (emphasis added). In view of this disclosure only, the Examiner concluded that Evans teaches the use of one *sensor* to control a number of valves. This conclusion must necessarily rest on the unstated premise by the Examiner that "one system" is equal to "one sensor."
>
> But the Board's decision, adopting the Examiner's premise, lacks the necessary substantial evidence to support a rejection of Kotzab's claims. Specifically, there is not substantial evidence to show that "one system" is the same thing as "one sensor." The

their characterizations with an expert witness affidavit, the law is that conclusory statements by an expert that a reference "teaches" something beyond its bare recitations/direct disclosure do not constitute ANY evidence of such "teachings" unless they are supported by objective documentary evidence.[74] Thus, when a party to a matter asserts that a reference "teaches" something beyond its bare recitations/direct disclosure, and that factual assertion is challenged by an opposite party, the law requires that the asserting party provide objective evidentiary support to "close the gap" between what the reference recites and the what the asserting party *alleges* the reference teaches; in the absence of such evidence, there should be no finding of fact in favor of the asserted teaching.[75,76,77,78] For each instance below in which the USPTO has made an

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> words "sensor" and "probe" are used throughout Evans to refer to the device that measures the mold temperature. … Evans clearly never uses the term "system" as a substitute for the simple temperature measuring device it calls "sensor." And, the Board made no reference to any evidence in the record that would equate "one system" with "one sensor."
>
> As mentioned previously, more than a mere scintilla of evidence is necessary to support the Board's implicit conclusion that "one system" is equal to "one sensor." Based on the entirety of Evans' disclosure, we cannot say that there is such relevant evidence as a reasonable mind might accept as adequate to support the conclusion that "one system" means "one sensor."

See id., 217 F.3d 1365, 1370-71 (Fed. Cir. 2000) (underline added).

[74] *See Motorola, Inc. v. Interdigital Tech. Corp.,* 121 F.3d 1461, 1473 (Fed. Cir. 1997) ("The district court's holding misapprehends the rigors of anticipation. For a prior art reference to anticipate a claim, the reference must disclose each and every element of the claim with sufficient clarity to prove its existence in the prior art... **Although this disclosure requirement presupposes the knowledge of one skilled in the art of the claimed invention, that presumed knowledge does not grant a license to read into the prior art reference teachings that are not there. An expert's conclusory testimony, unsupported by the documentary evidence, cannot supplant the requirement of anticipatory disclosure in the prior art reference itself.**") (emphasis added); *see also Genzyme Corp. v. Atrium Med. Corp.,* 315 F. Supp. 2d 552, 563 (D. Del. 2004) ("For a patent to be anticipated, every element of a patent claim must appear in a single reference. **Other references and opinion may be used to reveal what the reference would have meant to those skilled in the art at the time of the invention.... For a prior art reference to anticipate a claim, the reference must disclose each and every element of the claim with sufficient clarity to prove its existence in the prior art. Presumed knowledge of one skilled in the art does not allow an expert to read into the reference elements that are not there.**") (emphasis added)

[75] *See Rapoport v. Dement* 254 f. 3rd 1053, 1060 (Fed. Cir. 2001) . In *Rapoport,* the Federal Circuit affirmed the Board's holding that a publication did not anticipate a claim, reasoning as follows (emphasis added):

unsupported characterization, Applicant accordingly requests that the USPTO either (1) withdraw the corresponding claim rejection or (2) provide an affidavit setting forth objectively verifiable evidence sufficient to "close the gap" between the characterization and what the reference actually recites.

As can be seen from the foregoing, for example, the USPTO-identified portions of Miller do *not recite* the text of at least Clause [e] of Dependent Claim 2: "[e] printing the schedule of content transmission on a medium; and distributing the medium to one or more sites associated with one or more associated data switch controllers." Instead, Miller indicates that "The distribution schedules that can be accommodated are then transmitted to certain of the requesting content sources." (Miller 3:1-2.)

Also as noted above at page 86 *et seq.*, the USPTO has asserted that the Miller reference discloses "It should be noted the act of "transmitting" the "distribution schedule" across the "communication links" anticipates the act of "printing the schedule of content transmission on a medium" because the distribution schedule is reproduced (printed) on a communication link (medium) period." Applicant respectfully traverses this assertion and notes that the Miller reference actually indicates "The network resource scheduler then sends to each

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> Having construed the disputed term in the interference count and affirmed the Board's interpretation, we can properly address the merits of Rapoport's anticipation argument. The Board found that the disclosure of the FPR Publication was limited to treatment of anxiety in patients suffering from sleep apnea with buspirone, and did not address treatment of the underlying sleep apnea disorder. What a reference **teaches** is a question of fact,.... There is no disclosure in the FPR Publication of tests in which buspirone is administered to patients suffering from sleep apnea with the intent to cure the underlying condition.... The Board also correctly found that the FPR Publication does not show administering buspirone in any specific amounts to patients suffering from sleep apnea,... We note that there is no mention in the FRP Publication of administering buspirone to a patient at bedtime.... Therefore, for all the reasons stated above, we find that the Board's conclusion that the FPR Publication does not disclose administration of buspirone to patients suffering from sleep apnea to treat sleep apnea is supported by substantial evidence.

[76] *See In re Bell*, 991 F.2d 781 (Fed. Cir. 1993) (reversing the PTO's holding that a gene was "prima facie obvious over its corresponding protein" in the cited reference, absent any evidence of a one-to-one correspondence).

[77] *See In re McNeil-PPC*, 2008-1546 (Fed. Cir. July 31, 2009).

[78] *See In re Kotzab*, 217 F.3d 1365, 1369 (Fed. Cir. 2000).

requesting content source (i) the time to begin data transmission and (2) the rate at which to transmit the data." (Miller 3:54-57.) To Applicant, it appears that the USPTO has tried to close a significant gap between these actual recitations of the Miller reference and the structure of "[a] publishing a schedule of content transmission, the schedule being defined in response to an order in which the at least one content is spatially resident upon at least one hardware spatial data storage system, the schedule identifying the content by one or more times" and "[e] printing the schedule of content transmission on a medium; and distributing the medium to one or more sites associated with one or more associated data switch controllers" (of Applicant's Claim 2) without providing any evidence, by merely making this unsupported assertion.

Applicant has shown by direct quotations that Dependent Claim 2 and the USPTO's citations are very different on their faces. *See supra* at p. 85 (quotation of Claim 2 with its parent claim); and at p. 91 *et seq.* (quotation of Miller). Insofar that Applicant has shown that *"at first sight; on the first appearance; on the face of it; so far as can be judged from the first disclosure"* the USPTO-cited art is very different from Claim 2, and Applicant has noted that the USPTO has not cited to any objectively verifiable evidence/argument based on same sufficient to remedy such *prima facie* differences, the USPTO-cited technical material does not establish a *prima facie* case of the unpatentability of Claim 2 either under the MPEP or under controlling legal standards. *See supra* at pp. 24–37.

Accordingly, insofar as that Miller does not recite the text of at least Clauses [a] of Applicant's Dependent Claim 1 and [e] of Applicant's Dependent Claim 2, and insofar as that the USPTO has provided no objectively verifiable evidence, or argument based on objectively verifiable evidence, as to how Miller could be modified/combined to teach at least Clauses [a] of Applicant's Dependent Claim 1 and [e] of Dependent Claim 2, Applicant respectfully points out that under the MPEP guidelines as set forth above, the USPTO-cited technical material does not a establish a *prima facie* case of the unpatentability of Dependent Claim 2 for at least these reasons. Thus, Applicant respectfully asks

the USPTO to hold Dependent Claim 2 allowable and to issue a Notice of Allowability of same.

With respect to the USPTO assertions regarding the teachings of the cited material, Applicant demonstrated above that the express recitations of the cited material are not as the USPTO alleges, and that the USPTO has provided no evidence—let alone the preponderance of the evidence required—to support the USPTO assertions as to the factual conclusion as to what the cited material "teaches." Accordingly, Applicant respectfully points out that in view of the foregoing, the USPTO has presented no evidence that the cited material teaches as asserted by the USPTO. In addition, Applicant respectfully points out that even if the USPTO's assertions regarding the teachings of the cited material were supported, such would be of no moment in that the USPTO has yet to connect the alleged teaching of the cited material to the actual express language of Applicant's Dependent Claim 2. Under the MPEP guidelines as set forth above, the cited art of record fails to establish a *prima facie* case of unpatentability for at least these reasons. Accordingly, for at least the foregoing reasons, Applicant respectfully requests that the USPTO hold Dependent Claim 2 allowable and issue a Notice of Allowability of same.

Given that Applicant has shown, above, what the cited material actually recites, the question thus naturally arises as to how the USPTO saw the cited material as "teaching" something related to Clause [e] of Dependent Claim 2. Applicant respectfully points out that the Applicant's Application is the only objectively verifiable USPTO-cited document of record that shows or suggests what the USPTO purports the references to teach. From this and the express recitations of the cited material as set forth, it follows that the USPTO is interpreting the cited material through the lens of Applicant's application, which is impermissible hindsight use. Thus, at present, the USPTO's assertions regarding the cited material are untenable. Under the MPEP guidelines as set forth above, the cited art of record fails to establish a *prima facie* case of unpatentability for at

least these reasons. Accordingly, for at least the foregoing reasons, Applicant respectfully requests that the USPTO hold Dependent Claim 2 allowable and issue a Notice of Allowability of same.

As the USPTO has provided no objectively verifiable evidence, nor argument based on objectively verifiable evidence, in support of the USPTO assertions regarding what the technical material cited by the USPTO "teaches," Applicant infers that the USPTO is relying on "personal knowledge" and/or is taking "official notice" of one or more factors to reach the factual conclusion of what the cited technical material "teaches." In view of the foregoing, if the USPTO desires to maintain the rejection, in the next communication, Applicant respectfully requests that the USPTO provide an affidavit or declaration setting forth objectively verifiable evidence in support of the USPTO's currently unsupported assertions regarding what the cited technical material "teaches" and/or should be interpreted to "teach." *See, e.g.*, MPEP § 2144.03(C), *If Applicant Challenges a Factual Assertion as Not Properly Officially Noticed or Not Properly Based Upon Common Knowledge, the Examiner Must Support the Finding with Adequate Evidence*, and 37 C.F.R. 1.104(d)(2).

For reasons set forth above, Applicant respectfully submits that at least the underlined assertions set forth above are unsupported and erroneous, and appear to mischaracterize the Miller reference. As such, this statement is neither evidence nor argument based upon evidence. Instead, the USPTO has attempted to support the present rejection based on a "mere conclusory statement[]." Applicant accordingly requests that a rational underpinning for the present rejection be made explicit, or that the rejection be withdrawn.

C. Technical Material Cited by USPTO Does Not Show or Suggest the Text of Independent Claim 26 as Presented Herein; Notice of Allowance of Same Respectfully Requested

1. Independent Claim 26

Independent Claim 26 recites:

15. A system comprising:

[a] means for publishing a schedule of content transmission, the schedule being defined in response to an order in which the at least one content is spatially resident upon at least one hardware spatial data storage system, the schedule identifying the content by one or more times;

[b] means for reading at least one content from the at least one hardware spatial data storage system in a fashion independent of the schedule of content transmission; and

[c] means for transmitting the at least one content to a temporal data storage system in accord with the published schedule.[79]

As shown following, (1) the USPTO-cited material fails to recite several express recitations of these claims; (2) the USPTO is asserting that each cited reference "teaches" at least some of the text of Independent Claim 26, but has not provided any objectively verifiable evidence supporting these assertions; and (3) the USPTO has failed to adduce objective evidence of how to modify/combine the cited art to match the recitations of Independent Claim 26. Moreover, Applicant maintains that such modifications/combinations would change the principle of operation of the cited art and/or render its components unfit for their intended purpose.

Under the MPEP standards as set forth herein, the USPTO has not met the burden to establish a prima facie case of the unpatentability of Independent Claim 26 for any or all of the forgoing reasons. Accordingly, Applicant respectfully requests that the USPTO withdraw the rejections of Claim 26 and Issue a Notice of Allowability for same.

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Concerning this, the USPTO has recently stated as follows:

[79] The lettering of the clauses herein is merely for sake of clarity of argument and should not be taken to imply any particular ordering of the clauses.

6 **As per claims 1 and 26**, but more specifically claim 1, Miller discloses a method comprising:

publishing a schedule of content transmission, the schedule identifying the content by one or more times (col. 3, lines 1-2; col. 13, lines 4-9; Fig. 3, element 114);

transmitting the at least one content to a temporal data storage system in accord with the published schedule (col. 3, lines 3-8; col. 13, lines 10-13; Fig. 3, element 116; col. 5, lines 30-46; Fig. 1, elements 16, 18, 20, Fig. 2, element 46). *It should be noted that the "tape drives" within the "replicated servers" are analogous to a "temporal data storage system."*

Miller does not disclose reading at least one content from at least one hardware spatial data storage system in a fashion independent of the schedule of content transmission.

Jaeger discloses reading at least one content from at least one hardware spatial data storage system in a fashion independent of the schedule of content transmission (col. 5, lines 49-52; col. 2, lines 41-45; Fig. 1, element 11). *It should be noted that the "data signals/tracks" are analogous to the "at least one content" and that the "disk drive" is analogous to a "hardware spatial data storage system."*

Miller and Jaeger are analogous art because they are from the same field of endeavor, that being data transmission.

At the time of the invention it would have been obvious to a person of ordinary skill in the art to implement Jaeger's reordering of data signals within Miller's content source's hard disk drives because all the claimed elements were known in the prior art and one skilled in the art could have combined the elements as claimed by known methods with no change in their respective functions, and the combination would have yielded the predictable results of maximizing the number of data signals that can be transmitted from a disk drive by minimizing seek time of the disk drive head.

The combination of Miller/Jaeger does not disclose the schedule being defined in response to an order in which the at least one content is spatially resident upon at least one hardware spatial data storage system.

Ma discloses the schedule being defined in response to an order in which the at least one content is spatially resident upon at least one hardware spatial data storage system (col. 9, lines 10-22; col. 10, lines 43-60; Figs. 4 and 5). *It should be noted that "disk-based storage system 14" is equivalent to the "hardware spatial data storage system". It should also be noted that the schedules in Fig. 5 are defined in response to the location of data in the disk-based storage system. The location of data in the disk-based storage system dictates the order of data in the disk-based storage system. Therefore, it follows that the schedules in Fig. 5 are also defined in response to the order of the data in the disk-based storage system.*

The combination of Miller/Jaeger and Ma are analogous art because they are from the same field of endeavor, that being data transmission.

At the time of the invention it would have been obvious to a person of ordinary skill in the art to apply Ma's scheduling technique to Miller/Jaeger's distribution schedule. The motivation for doing so would have been to provide sequential-like parallel retrieval suitable for supporting real-time multimedia data distribution for large numbers of clients.

Office Action, pp. 3-5 (5 October 2009). [80]

Accordingly, the USPTO has rejected Independent Claim 26 for the same or similar reasons as Independent Claim 1. In conjunction with the reasons for allowability discussed above, Applicant respectfully points out that Applicant has reviewed the Miller references identified by the USPTO, and so far as Applicant can discern, the USPTO-identified portions of Miller do ***not recite***, for example,

[80] Applicant respectfully asserts that the USPTO has apparently not examined the recitations of Applicant's claims, but appears to have not addressed the express language of both Applicant's claims and the cited technical material. Accordingly, Applicant respectfully maintains that the USPTO has not established a *prima facie* case of the unpatentability of any pending claim for at least this reason. Notwithstanding the foregoing, Applicant demonstrates herein that even if the USPTO had followed the MPEP examination guidelines, no *prima facie* case of unpatentability would be extant.

the text of at least Clause [a] of Independent Claim 26: "the schedule identifying the content by one or more times." [81] Instead, Miller indicates "In this step, the scheduler 10 distributes transmission instructions to the content sources 12, 14. These instructions include the time to start transmitting the content data to the replicated servers 16, 18, 20, the transfer rate, typically in bits/second, the overage factor, and the multicast address assigned." Miller at col. 13, lines 4-9.

Also as noted above at page 101 *et seq.*, the USPTO has asserted that the Miller reference "*The distribution schedules that can be accommodated are then transmitted to certain of the requesting content sources.*" (emphasis added). Applicant respectfully traverses this assertion and notes that the Miller reference actually indicates "The transmission of data (e.g., a computer file) from one or more content sources over a network to one or more replicated servers is scheduled and performed according to the schedule. The content sources request the schedule from a network resource scheduler. The scheduler receives the requests and determines if and how the various requests can be accommodated. The scheduler determines at least a start time and a transfer rate for each of the content sources that can be accommodated."[82] (Miller Abstract.) To Applicant, it appears that the USPTO has tried to close a significant gap between these actual recitations of the Miller reference and the structure of "[a] publishing a schedule of content transmission, the schedule being defined in response to an order in which the at least one content is spatially resident upon at least one hardware spatial data storage system, the schedule identifying the content by one or more times" (of Applicant's Claim 26) without providing any evidence, by merely making this unsupported assertion.

Applicant has shown by direct quotations that Independent Claim 26 and the Miller reference are very different on their faces. *See supra* at p. 101 (quotation of Claim 26); and at p. 104 *et seq.* (quotation of Miller). Insofar that

[81] Neither do the USPTO-identified portions of Jaeger and/or Ma recite "the schedule identifying the content by one or more times," as recited in Clause [a].

[82] Thus, Miller does not recite that the requesting content sources identify their data. The schedule instead determines a start time and a transfer rate for each of content sources that can be accommodated. As such, the content of the content sources is not identified.

Applicant has shown that *"at first sight; on the first appearance; on the face of it; so far as can be judged from the first disclosure"* the USPTO-cited art is very different from Claim 26, and Applicant has noted that the USPTO has not cited to any objectively verifiable evidence/argument based on same sufficient to remedy such *prima facie* differences, the USPTO-cited technical material does not establish a *prima facie* case of the unpatentability of Claim 26 either under the MPEP or under controlling legal standards. *See supra* at pp. 24–37

2. Dependent Claims 27-50: Patentable for at Least Reasons of Dependency from Independent Claim 26.

Claims 27-50 depend either directly or indirectly from Independent Claim 26. "A claim in dependent form shall be construed to incorporate by reference all the limitations of the claim to which it refers." *See* 35 U.S.C. § 112 paragraph 4. Consequently, Dependent Claims 27-50 are patentable for at least the reasons why Independent Claim 26 is patentable. Accordingly, Applicant respectfully requests that USPTO hold Dependent Claims 27-50 patentable for at least the foregoing reasons, and issue a Notice of Allowance on same.

3. Dependent Claim 27 is Independently Patentable

Independent Claim 26 recites as follows:

> 26. A system comprising:
>
> [a] means for publishing a schedule of content transmission, the schedule being defined in response to an order in which the at least one content is spatially resident upon at least one hardware spatial data storage system, the schedule identifying the content by one or more times;
>
> [b] means for reading at least one content from the at least one hardware spatial data storage system in a fashion independent of the schedule of content transmission; and
>
> [c] means for transmitting the at least one content to a temporal data storage system in accord with the published schedule.

Dependent Claim 27 recites as follows:

2. The system of Claim 26, [d] wherein said means for publishing a schedule of content transmission, the schedule being defined in response to an order in which the at least one content is spatially resident upon at least one hardware spatial data storage system, the schedule identifying the content by one or more times further comprises:

[e] means for printing the schedule of content transmission on a medium; and means for distributing the medium to one or more sites associated with one or more associated data switch controllers.[83]

As shown following, (1) the USPTO-cited material fails to recite several express recitations of these claims; (2) the USPTO is asserting that each cited reference "teaches" at least some of the text of Dependent Claim 27, but has not provided any objectively verifiable evidence supporting these assertions; and (3) the USPTO has failed to adduce objective evidence of how to modify/combine the cited art to match the recitations of Dependent Claim 27. Moreover, Applicant maintains that such modifications/combinations would change the principle of operation of the cited art and/or render its components unfit for their intended purpose.

Concerning this subject matter, the USPTO has stated the following:

As to Applicant's arguments with respect to Claim 26:

[83] The lettering of the clauses herein is merely for sake of clarity of argument and should not be taken to imply any particular ordering of the clauses.

6 **As per claims 1 and 26**, but more specifically claim 1, Miller discloses a method comprising:

publishing a schedule of content transmission, the schedule identifying the content by one or more times (col. 3, lines 1-2; col. 13, lines 4-9; Fig. 3, element 114);

transmitting the at least one content to a temporal data storage system in accord with the published schedule (col. 3, lines 3-8; col. 13, lines 10-13; Fig. 3, element 116; col. 5, lines 30-46; Fig. 1, elements 16, 18, 20, Fig. 2, element 46). *It should be noted that the "tape drives" within the "replicated servers" are analogous to a "temporal data storage system."*

Miller does not disclose reading at least one content from at least one hardware spatial data storage system in a fashion independent of the schedule of content transmission.

Jaeger discloses reading at least one content from at least one hardware spatial data storage system in a fashion independent of the schedule of content transmission (col. 5, lines 49-52; col. 2, lines 41-45; Fig. 1, element 11). *It should be noted that the "data signals/tracks" are analogous to the "at least one content" and that the "disk drive" is analogous to a "hardware spatial data storage system."*

Miller and Jaeger are analogous art because they are from the same field of endeavor, that being data transmission.

At the time of the invention it would have been obvious to a person of ordinary skill in the art to implement Jaeger's reordering of data signals within Miller's content source's hard disk drives because all the claimed elements were known in the prior art and one skilled in the art could have combined the elements as claimed by known methods with no change in their respective functions, and the combination would have yielded the predictable results of maximizing the number of data signals that can be transmitted from a disk drive by minimizing seek time of the disk drive head.

The combination of Miller/Jaeger does not disclose the schedule being defined in response to an order in which the at least one content is spatially resident upon at least one hardware spatial data storage system.

Ma discloses the schedule being defined in response to an order in which the at least one content is spatially resident upon at least one hardware spatial data storage system (col. 9, lines 10-22; col. 10, lines 43-60; Figs. 4 and 5). *It should be noted that "disk-based storage system 14" is equivalent to the "hardware spatial data storage system". It should also be noted that the schedules in Fig. 5 are defined in response to the location of data in the disk-based storage system. The location of data in the disk-based storage system dictates the order of data in the disk-based storage system. Therefore, it follows that the schedules in Fig. 5 are also defined in response to the order of the data in the disk-based storage system.*

The combination of Miller/Jaeger and Ma are analogous art because they are from the same field of endeavor, that being data transmission.

At the time of the invention it would have been obvious to a person of ordinary skill in the art to apply Ma's scheduling technique to Miller/Jaeger's distribution schedule. The motivation for doing so would have been to provide sequential-like parallel retrieval suitable for supporting real-time multimedia data distribution for large numbers of clients.

Office Action at p. 3-5 (5 October 2009).

As to Applicant's arguments with respect to Claim 27:

7. As per claims 2 and 27, the combination of Miller/Jaeger/Ma discloses said publishing a schedule of content transmission, the schedule being defined in response to an order in which the at least one content is spatially resident upon at least one hardware spatial data storage system, the schedule identifying the content by one or more times further comprises:

printing the schedule of content transmission on a medium (Miller, col. 3, lines 1-2 and 63-67; col. 13, lines 4-9; Fig. 3, element 114); *It should be noted that act of "transmitting" the "distribution schedule" across the "communication links" anticipates the act of "printing the schedule of content transmission on a medium" because the distribution schedule is reproduced ("printed") on the communication link ("medium").*

and distributing the medium to one or more sites associated with one or more associated data switch controllers (Miller, col. 3, lines 1-2; col. 13, lines 4-9; Fig. 3, element 114; col. 5, lines 39-43; Fig. 1, elements 16, 18, 20; Fig. 2, element 34). *It should be noted that the "replicated servers" are equivalent to the "one or more sites" and that the "I/O controllers" are equivalent to the "data switch controllers."*

Office Action at p. 5-6 (5 October 2009). Accordingly, the USPTO has rejected Dependent Claim 27 for the same or similar reasons as Dependent Claim 26. As can be seen from the foregoing, for example, the USPTO-identified portions of Miller do *not recite* the text of at least Clause [e] of Dependent Claim 27: "[e] means for printing the schedule of content transmission on a medium; and distributing the medium to one or more sites associated with one or more associated data switch controllers." Instead, Miller indicates that "The distribution schedules that can be accommodated are then transmitted to certain of the requesting content sources." (Miller 3:1-2.)

Also as noted above at page 108 *et seq.*, the USPTO has asserted that the Miller reference discloses "It should be noted the act of "transmitting" the "distribution schedule" across the "communication links" anticipates the act of "printing the schedule of content transmission on a medium" because the distribution schedule is reproduced (printed) on a communication link (medium) period." Applicant respectfully traverses this assertion and notes that the Miller

reference actually indicates "The network resource scheduler then sends to each requesting content source (i) the time to begin data transmission and (2) the rate at which to transmit the data." (Miller 3:54-57.) To Applicant, it appears that the USPTO has tried to close a significant gap between these actual recitations of the Miller reference and the structure of "[a] means for publishing a schedule of content transmission, the schedule being defined in response to an order in which the at least one content is spatially resident upon at least one hardware spatial data storage system, the schedule identifying the content by one or more times" and "[e] means for printing the schedule of content transmission on a medium; and distributing the medium to one or more sites associated with one or more associated data switch controllers" (of Applicant's Claim 27) without providing any evidence, by merely making this unsupported assertion.

Applicant has shown by direct quotations that Dependent Claim 27 and the USPTO's citations are very different on their faces. *See supra* at p. 106 (quotation of Claim 27 with its parent claim); and at p. 109 *et seq.* (quotation of Miller). Insofar that Applicant has shown that *"at first sight; on the first appearance; on the face of it; so far as can be judged from the first disclosure"* the USPTO-cited art is very different from Claim 27, and Applicant has noted that the USPTO has not cited to any objectively verifiable evidence/argument based on same sufficient to remedy such *prima facie* differences, the USPTO-cited technical material does not establish a *prima facie* case of the unpatentability of Claim 27 either under the MPEP or under controlling legal standards. *See supra* at pp. 24–37.

Accordingly, insofar as that Miller does not recite the text of at least Clauses [a] of Applicant's Dependent Claim 1 and [e] of Applicant's Dependent Claim 27, and insofar as that the USPTO has provided no objectively verifiable evidence, or argument based on objectively verifiable evidence, as to how Miller could be modified/combined to teach at least Clauses [a] of Applicant's Dependent Claim 1 and [e] of Dependent Claim 27, Applicant respectfully points out that under the MPEP guidelines as set forth above, the USPTO-cited technical

material does not a establish a *prima facie* case of the unpatentability of Dependent Claim 27 for at least these reasons. Thus, Applicant respectfully asks the USPTO to hold Dependent Claim 27 allowable and to issue a Notice of Allowability of same.

VIII. EVIDENCE APPENDIX

Appellant hereby indicates as follows: "none" or "not applicable."

IX. RELATED PROCEEDINGS APPENDIX

Appellant hereby indicates as follows: "none" or "not applicable."

X. CONCLUSION

Applicant may have during the course of prosecution cancelled and/or amended one or more claims. Applicant notes that any such cancellations and/or amendments will have transpired (i) prior to issuance and (ii) in the context of the rules that govern claim interpretation during prosecution before the United States Patent and Trademark Office (PTO). Applicant notes that the rules that govern claim interpretation during prosecution form a radically different context than the rules that govern claim interpretation subsequent to a patent issuing. Accordingly, Applicant respectfully submits that any cancellations and/or amendments during the course of prosecution should be held to be tangential to and/or unrelated to patentability in the event that such cancellations and/or amendments are viewed in a post-issuance context under post-issuance claim interpretation rules.

Insofar as that the Applicant may have during the course of prosecution cancelled/amended claims sufficient to obtain a Notice of Allowability of all claims pending, Applicant may not have during the course of prosecution explicitly addressed all rejections and/or statements in Office Actions. The fact that rejections and/or statements may not be explicitly addressed during the course of prosecution should NOT be taken as an admission of any sort, and Applicant hereby reserves any and all rights to contest such rejections and/or

statements at a later time. Specifically, no waiver (legal, factual, or otherwise), implicit or explicit, is hereby intended (e.g., with respect to any facts of which the USPTO took Official Notice, and/or for which the USPTO has supplied no objective showing, Applicant hereby contests those facts and requests express documentary proof of such facts at such time at which such facts may become relevant). For example, although not expressly set forth during the course of prosecution, Applicant continues to assert all points of (e.g. caused by, resulting from, responsive to, etc.) any previous Office Action, and no waiver (legal, factual, or otherwise), implicit or explicit, is hereby intended. Specifically, insofar as that Applicant does not consider the cancelled/unamended claims to be unpatentable, Applicant hereby gives notice that it may intend to file and/or has filed a continuing application in order prosecute such cancelled/unamended claims.

With respect to any cancelled claims, such cancelled claims were and continue to be a part of the original and/or present patent application(s). Applicant hereby reserves all rights to present any cancelled claim or claims for examination at a later time in this or another application. Applicant hereby gives public notice that any cancelled claims are still to be considered as present in all related patent application(s) (e.g. the original and/or present patent application) for all appropriate purposes (e.g., written description and/or enablement). Applicant does NOT intend to dedicate the subject matter of any cancelled claims to the public.

Should this case go to appeal, Applicant reserves the right to submit argument, rebuttal evidence, or legal authority in the instance the Board of Patent Appeals and Interferences finds that the USPTO has met its burden in establishing a *prima facie* case of unpatentability of the various appealed claims. Applicant further reserves the right to submit argument, rebuttal evidence, or legal authority if new claim interpretations or definitional citations are raised on appeal. The fact that argument, rebuttal evidence, or legal authority may not have been explicitly discussed during the course of prosecution should NOT be taken as an admission or waiver of any sort, and Applicant hereby reserves any and all rights to discuss

(e.g. make explicit, produce, or explain) such rebuttal evidence at a later time.

The USPTO is encouraged to contact the undersigned by telephone at 360-649-5566 to discuss the above and any other distinctions between the claims and the applied references, if desired. Also, if the USPTO notes any informalities in the claims, it is encouraged to contact the undersigned to expediently correct such informalities.

Respectfully submitted,

February 17, 2010	/Dale C. Barr, Reg. No. 40,498/
Date	for Mark R. Hennings Registration No. 48,982

APPENDIX A. APPENDIX OF CLAIMS INVOLVED IN THE APPEAL

1. (PREVIOUSLY PRESENTED) A method comprising:

publishing a schedule of content transmission, the schedule being defined in response to an order in which the at least one content is spatially resident upon at least one hardware spatial data storage system, the schedule identifying the content by one or more times;

reading at least one content from the at least one hardware spatial data storage system in a fashion independent of the schedule of content transmission; and

transmitting the at least one content to a temporal data storage system in accord with the published schedule.

2. (PREVIOUSLY PRESENTED) The method of Claim 1, wherein said publishing a schedule of content transmission, the schedule being defined in response to an order in which the at least one content is spatially resident upon at least one hardware spatial data storage system, the schedule identifying the content by one or more times further comprises:

printing the schedule of content transmission on a medium; and

distributing the medium to one or more sites associated with one or more associated data switch controllers.

3. (PREVIOUSLY PRESENTED) The method of Claim 1, wherein said publishing a schedule of content transmission, the schedule being defined in response to an order in which the at least one content is spatially resident upon at least one hardware spatial data storage system, the schedule identifying the content by one or more times further comprises:

transmitting the schedule of content transmission over a data communications link.

4. (PREVIOUSLY PRESENTED) The method of Claim 1, wherein said publishing a schedule of content transmission, the schedule being defined in response to an order in which the at least one content is spatially resident upon at least one hardware spatial data storage system, the schedule identifying the content by one or more times further comprises:

transmitting the schedule of content transmission over a sideband data communications link.

5. (PREVIOUSLY PRESENTED) The method of Claim 1, wherein said publishing a schedule of content transmission, the schedule being defined in response to an order in which the at least one content is spatially resident upon at least one hardware spatial data storage system, the schedule identifying the content by one or more times further comprises:

transmitting the schedule of content transmission to the temporal data storage system.

6. (ORIGINAL) The method of Claim 5, wherein said transmitting the schedule of content transmission to the temporal data storage system further comprises:

interleaving the schedule of content with other data.

7. (ORIGINAL) The method of Claim 6, wherein said interleaving the schedule of content with other data further comprises:

transmitting the schedule relative to at least one time marker amongst the at least one content.

8. (ORIGINAL) The method of Claim 6, wherein said interleaving the schedule of content with other data further comprises:

transmitting the schedule amongst the at least one content at a determined interval of time.

9. (PREVIOUSLY PRESENTED) The method of Claim 1, wherein said reading at least one content from the at least one hardware spatial data storage system in a fashion independent of the schedule of content transmission further comprises:

reading the at least one content from at least one hard disk drive.

10. (PREVIOUSLY PRESENTED) The method of Claim 9, wherein said reading the at least one content from at least one hard disk drive further comprises:

reading tracks of the at least one hard disk drive in a defined sequence including at least a sequence starting with an outer track and ending with an inner track.

11. (PREVIOUSLY PRESENTED) The method of Claim 9, wherein said reading the at least one content from at least one hard disk drive further comprises:

reading tracks of the at least one hard disk drive in a defined sequence including at least a sequence starting with an inner track and ending with an outer track.

12. (PREVIOUSLY PRESENTED) The method of Claim 9, wherein said reading the at least one content from at least one hard disk drive further comprises:

reading the at least one content from a first disk drive; and

reading a copy of the at least one content from a second disk drive.

13. (PREVIOUSLY PRESENTED) The method of Claim 9, wherein said reading the at least one content from at least one hard disk drive further comprises:

determining a first time interval during which a first segment of a first content will be from a first disk drive;

determining a second time interval during which a second segment of the first content will be read from a second disk drive; and

defining the schedule in response to the first time interval and the second time interval.

14. (PREVIOUSLY PRESENTED) The method of Claim 1, wherein said reading at least one content from the at least one hardware spatial data storage system in a fashion independent of the schedule of content transmission further comprises:

reading the at least one content of a hard disk drive such that an aggregate distance traversed by a hard disk head is minimized.

15. (PREVIOUSLY PRESENTED) The method of Claim 1, wherein said reading at least one content from the at least one hardware spatial data storage system in a fashion independent of the schedule of content transmission further comprises:

reading the at least one content of a spatial address device such that an aggregate time to read the at least one content of the spatial address device is minimized.

16. (PREVIOUSLY PRESENTED) The method of Claim 1, wherein said reading at least one content from the at least one hardware spatial data storage system in a fashion independent of the schedule of content transmission further comprises:

reading a storage of a hard disk drive with a hard drive arm having at least two disk drive heads, at least one of which is dedicated to at least one specific disk drive track.

17. (PREVIOUSLY PRESENTED) The method of Claim 1, wherein said reading at least one content from the at least one hardware spatial data storage system in a fashion independent of the schedule of content transmission further comprises:

reading the at least one content from at least one file address storage system.

18. (PREVIOUSLY PRESENTED) The method of Claim 1, wherein said reading at least one content from the at least one hardware spatial data storage system in a fashion independent of the schedule of content transmission further comprises:

reading the at least one content from at least one disk address storage system.

19. (PREVIOUSLY PRESENTED) The method of Claim 1, wherein said reading at least one content from the at least one hardware spatial data storage system in a fashion independent of the schedule of content transmission further comprises:

reading the at least one content from at least one tape address storage system.

20. (PREVIOUSLY PRESENTED) The method of Claim 1, wherein said reading at least one content from the at least one hardware spatial data storage system in a fashion independent of the schedule of content transmission further comprises:

reading the at least one content from at least one static memory address storage system.

21. (PREVIOUSLY PRESENTED) The method of Claim 1, wherein said reading at least one content from the at least one hardware spatial data storage

system in a fashion independent of the schedule of content transmission further comprises:

reading the at least one content from at least one object address storage system.

22. (PREVIOUSLY PRESENTED) The method of Claim 1, wherein said transmitting the at least one content to a temporal data storage system in accord with the published schedule further comprises:

receiving a portion of the at least one content from the hardware_spatial data storage system with a delay-reclocking drive;

writing the portion of the at least one content to the delay-reclocking drive with a head of a first arm of the delay-reclocking drive;

reading the portion of the at least one content from the delay-reclocking drive with a head of a second arm of the delay-reclocking drive, the head of the second arm of the delay-reclocking drive being on a same track as the head of the first arm; and

transmitting the portion of the at least one content to the temporal data storage system.

23. (PREVIOUSLY PRESENTED) The method of Claim 1, wherein said transmitting the at least one content to a temporal data storage system in accord with the published schedule further comprises:

receiving a portion of the at least one content from the hardware_spatial data storage system with a delay-reclocking drive;

writing the portion of the at least one content to the delay-reclocking drive with a head of a first arm of the delay-reclocking drive;

reading the portion of the at least one content from the delay-reclocking drive with a head of a second arm of the delay-reclocking drive, the head of the second arm of the delay-reclocking drive being on a different track than the head of the first arm; and

transmitting the portion of the at least one content to the temporal data storage system.

24. (PREVIOUSLY PRESENTED) The method of Claim 1, wherein said transmitting the at least one content to a temporal data storage system in accord with the published schedule further comprises:

receiving a portion of the at least one content from the hardware_spatial data storage system with a delay-reclocking drive;

writing the portion of the at least one content to the delay-reclocking drive with a first head of a first arm of the delay-reclocking drive;

reading the portion of the at least one content from the delay-reclocking drive with a second head of the first arm of the delay-reclocking drive; and

transmitting the portion of the at least one content to the temporal data storage system.

25. (PREVIOUSLY PRESENTED) The method of Claim 1, wherein said transmitting the at least one content to a temporal data storage system in accord with the published schedule further comprises:

receiving a portion of the at least one content from the hardware_spatial data storage system with a delay-reclocking drive;

writing the portion of the at least one content to the delay-reclocking drive with a first head of a first arm of the delay-reclocking drive;

reading the portion of the at least one content from the delay-reclocking drive with the first head of the first arm of the delay-reclocking drive; and

transmitting the portion of the at least one content to the temporal data storage system.

26. (PREVIOUSLY PRESENTED) A system comprising:

means for publishing a schedule of content transmission, the schedule being defined in response to an order in which the at least one content is spatially resident upon at least one hardware spatial data storage system, the schedule identifying the content by one or more times;

means for reading at least one content from at least one hardware spatial data storage system in a fashion independent of the schedule of content transmission; and

means for transmitting the at least one content to a temporal data storage system in accord with the published schedule.

27. (PREVIOUSLY PRESENTED) The system of Claim 26, wherein said means for publishing a schedule of content transmission, the schedule being defined in response to an order in which the at least one content is spatially resident upon at least one hardware spatial data storage system, the schedule identifying the content by one or more times further comprises:

means for printing the schedule of content transmission on a medium; and

means for distributing the medium to one or more sites associated with one or more associated data switch controllers.

28. (PREVIOUSLY PRESENTED) The system of Claim 26, wherein said means for publishing a schedule of content transmission, the schedule being defined in response to an order in which the at least one content is spatially resident upon at least one hardware spatial data storage system, the schedule identifying the content by one or more times further comprises:

means for transmitting the schedule of content transmission over a data communications link.

29. (PREVIOUSLY PRESENTED) The system of Claim 26, wherein said means for publishing a schedule of content transmission, the schedule being defined in response to an order in which the at least one content is spatially

resident upon at least one hardware spatial data storage system, the schedule identifying the content by one or more times further comprises:

means for transmitting the schedule of content transmission over a sideband data communications link.

30. (PREVIOUSLY PRESENTED) The system of Claim 26, wherein said means for publishing a schedule of content transmission, the schedule being defined in response to an order in which the at least one content is spatially resident upon at least one hardware spatial data storage system, the schedule identifying the content by one or more times further comprises:

means for transmitting the schedule of content transmission to the temporal data storage system.

31. (ORIGINAL) The system of Claim 30, wherein said means for transmitting the schedule of content transmission to the temporal data storage system further comprises:

means for interleaving the schedule of content with other data.

32. (ORIGINAL) The system of Claim 31, wherein said means for interleaving the schedule of content with other data further comprises:

means for transmitting the schedule relative to at least one time marker amongst the at least one content.

33. (ORIGINAL) The system of Claim 31, wherein said means for interleaving the schedule of content with other data further comprises:

means for transmitting the schedule amongst the at least one content at a determined interval of time.

34. (PREVIOUSLY PRESENTED) The system of Claim 26, wherein said means for reading at least one content from at least one hardware spatial data

storage system in a fashion independent of the schedule of content transmission further comprises:

means for reading the at least one content from at least one hard disk drive.

35. (PREVIOUSLY PRESENTED) The system of Claim 34, wherein said means for reading the at least one content from at least one hard disk drive further comprises:

means for reading tracks of the at least one hard disk drive in a defined sequence including at least a sequence starting with an outer track and ending with an inner track.

36. (PREVIOUSLY PRESENTED) The system of Claim 34, wherein said means for reading the at least one content from at least one hard disk drive further comprises:

means for reading tracks of the at least one hard disk drive in a defined sequence including at least a sequence starting with an inner track and ending with an outer track.

37. (PREVIOUSLY PRESENTED) The system of Claim 34, wherein said means for reading the at least one content from at least one hard disk drive further comprises:

means for reading the at least one content from a first disk drive; and

means for reading a copy of the at least one content from a second disk drive.

38. (ORIGINAL) The system of Claim 34, wherein said means for reading the at least one content from at least one hard disk drive further comprises:

means for reading a first content from a first disk drive; and

means for reading a second content from a second disk drive.

39. (PREVIOUSLY PRESENTED) The system of Claim 26, wherein said means for reading at least one content from at least one hardware spatial data storage system in a fashion independent of the schedule of content transmission further comprises:

means for reading the at least one content of a hard disk drive such that an aggregate distance traversed by a hard disk head is minimized.

40. (PREVIOUSLY PRESENTED) The system of Claim 26, wherein said means for reading at least one content from at least one hardware spatial data storage system in a fashion independent of the schedule of content transmission further comprises:

means for reading the at least one content of a spatial address device such that an aggregate time to read the at least one content of the spatial address device is minimized.

41. (PREVIOUSLY PRESENTED) The system of Claim 26, wherein said means for reading at least one content from at least one hardware spatial data storage system in a fashion independent of the schedule of content transmission further comprises:

means for reading a storage of a hard disk drive with a hard drive arm having at least two disk drive heads, at least one of which is dedicated to at least one specific disk drive track.

42. (PREVIOUSLY PRESENTED) The system of Claim 26, wherein said means for reading at least one content from at least one hardware spatial data storage system in a fashion independent of the schedule of content transmission further comprises:

means for reading the at least one content from at least one file address storage system.

43. (PREVIOUSLY PRESENTED) The system of Claim 26, wherein said means for reading at least one content from at least one hardware spatial data storage system in a fashion independent of the schedule of content transmission further comprises:

means for reading the at least one content from at least one disk address storage system.

44. (PREVIOUSLY PRESENTED) The system of Claim 26, wherein said means for reading at least one content from at least one hardware spatial data storage system in a fashion independent of the schedule of content transmission further comprises:

means for reading the at least one content from at least one tape address storage system.

45. (PREVIOUSLY PRESENTED) The system of Claim 26, wherein said means for reading at least one content from at least one hardware spatial data storage system in a fashion independent of the schedule of content transmission further comprises:

means for reading the at least one content from at least one static memory address storage system.

46. (PREVIOUSLY PRESENTED) The system of Claim 26, wherein said means for reading at least one content from at least one hardware spatial data storage system in a fashion independent of the schedule of content transmission further comprises:

means for reading the at least one content from at least one object address storage system.

47. (PREVIOUSLY PRESENTED) The system of Claim 26, wherein said means for transmitting the at least one content to a temporal data storage system in accord with the published schedule further comprises:

means for receiving a portion of the at least one content from the hardware spatial data storage system with a delay-reclocking drive;

means for writing the portion of the at least one content to the delay-reclocking drive with a head of a first arm of the delay-reclocking drive;

means for reading the portion of the at least one content from the delay-reclocking drive with a head of a second arm of the delay-reclocking drive, the head of the second arm of the delay-reclocking drive being on a same track as the head of the first arm; and

means for transmitting the portion of the at least one content to the temporal data storage system.

48. (PREVIOUSLY PRESENTED) The system of Claim 26, wherein said means for transmitting the at least one content to a temporal data storage system in accord with the published schedule further comprises:

means for receiving a portion of the at least one content from the hardware spatial data storage system with a delay-reclocking drive;

means for writing the portion of the at least one content to the delay-reclocking drive with a head of a first arm of the delay-reclocking drive;

means for reading the portion of the at least one content from the delay-reclocking drive with a head of a second arm of the delay-reclocking drive, the head of the second arm of the delay-reclocking drive being on a different track than the head of the first arm; and

means for transmitting the portion of the at least one content to the temporal data storage system.

49. (PREVIOUSLY PRESENTED) The system of Claim 26, wherein said means for transmitting the at least one content to a temporal data storage system in accord with the published schedule further comprises:

means for receiving a portion of the at least one content from the hardware spatial data storage system with a delay-reclocking drive;

means for writing the portion of the at least one content to the delay-reclocking drive with a first head of a first arm of the delay-reclocking drive;

means for reading the portion of the at least one content from the delay-reclocking drive with a second head of the first arm of the delay-reclocking drive; and

means for transmitting the portion of the at least one content to the temporal data storage system.

50. (PREVIOUSLY PRESENTED) The system of Claim 26, wherein said means for transmitting the at least one content to a temporal data storage system in accord with the published schedule further comprises:

means for receiving a portion of the at least one content from the hardware spatial data storage system with a delay-reclocking drive;

means for writing the portion of the at least one content to the delay-reclocking drive with a first head of a first arm of the delay-reclocking drive;

means for reading the portion of the at least one content from the delay-reclocking drive with the first head of the first arm of the delay-reclocking drive; and

means for transmitting the portion of the at least one content to the temporal data storage system.

APPENDIX B. APPENDIX OF EVIDENCE (NOT APPLICABLE).

APPENDIX C. APPENDIX OF RELATED PROCEEDINGS (NOT APPLICABLE).